

1995

Course Catalog 1995-1996

CSUSB

Follow this and additional works at: <http://scholarworks.lib.csusb.edu/csusb-catalog>

Recommended Citation

CSUSB, "Course Catalog 1995-1996" (1995). *Bulletin of Courses (Course Catalog)*. Book 42.
<http://scholarworks.lib.csusb.edu/csusb-catalog/42>

This Book is brought to you for free and open access by the CSUSB Archives at CSUSB ScholarWorks. It has been accepted for inclusion in Bulletin of Courses (Course Catalog) by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.



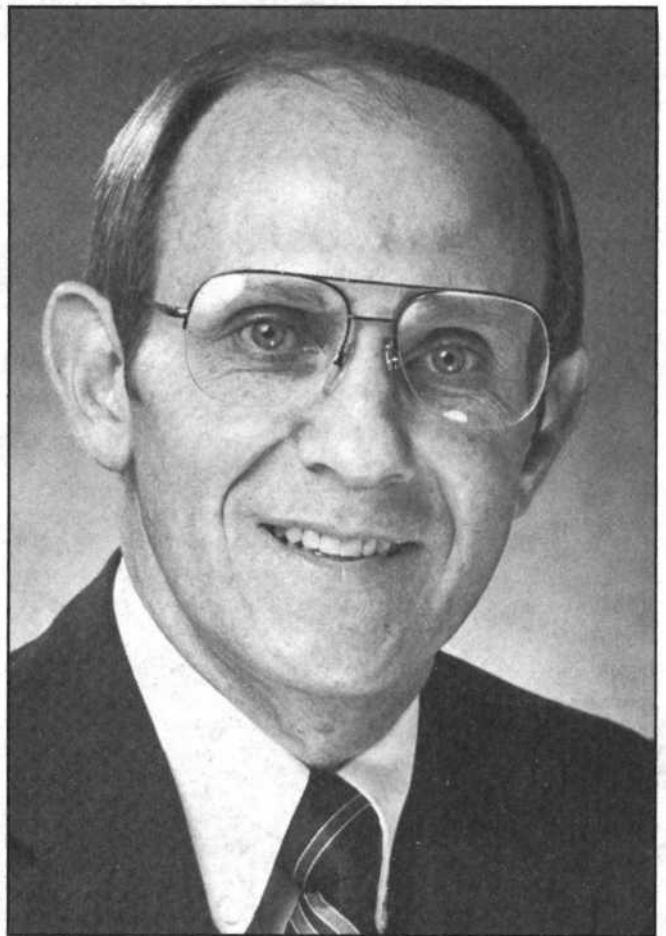
CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

Catalog of Programs



95 ■ 96





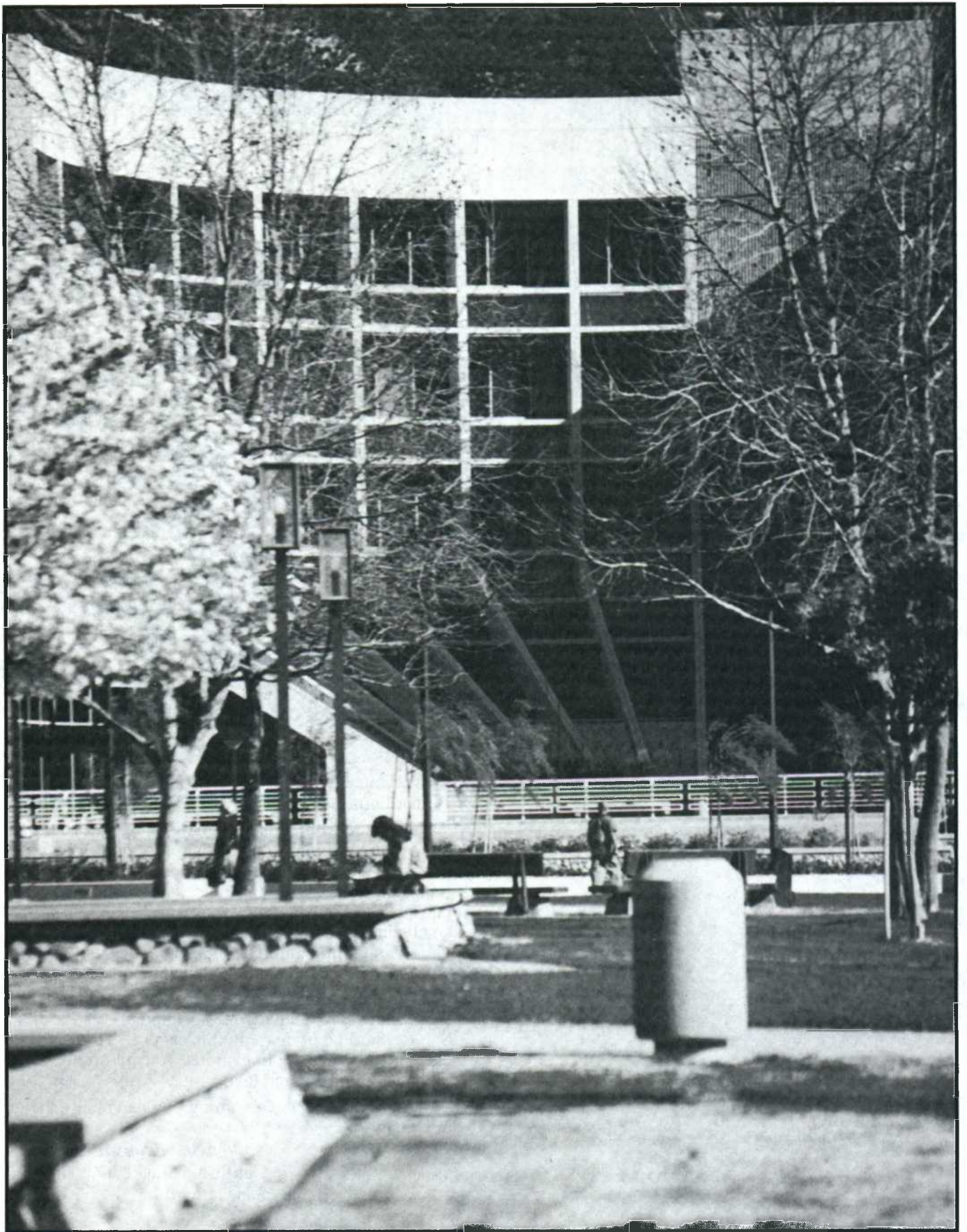
Welcome to California State University, San Bernardino.

Your interest in this university may lead you to one of the most important decisions of your life: choosing the right university for you. At Cal State, San Bernardino, you can expect a quality education backed by an outstanding faculty and an emphasis on small classes. Our students also benefit from a wide variety of cultural, athletic and social events that enhance personal and intellectual development.

You will get a sense of the academic programs, student life and other services offered at Cal State, San Bernardino by reading this catalog. To experience the qualities of our campus, you are invited to visit the university and take a tour.

I look forward to welcoming you personally to our university.

*Anthony H. Evans, President
California State University,
San Bernardino*



Contents

ACADEMIC CALENDAR	4
THE CSU	7
THE UNIVERSITY	11
ACADEMIC PROGRAM	17
ACADEMIC SUPPORT SERVICES	25
STUDENT LIFE	27
ADMISSION	35
FEE SCHEDULE	43
ACADEMIC REGULATIONS	47
UNDERGRADUATE DEGREE REQUIREMENTS	57
CERTIFICATE PROGRAMS	66
EXTENDED EDUCATION	69
THE CURRICULUM (Undergraduate Degree Programs)	71
GRADUATE STUDIES (Graduate Degree Programs)	317
FACULTY	429
APPENDIX	447
INDEX	455

This catalog represents the University's course descriptions and requirements at the undergraduate and graduate levels. California State University, San Bernardino reserves the right to revise catalog provisions in accordance with official actions of the Board of Trustees of the California State University and other governing bodies. Students are advised to consult the appropriate department, school or office for current information. Supplementary bulletins contain additional information about extended education and summer programs. The 1995-96 *Bulletin, Catalog of Programs* may be purchased at the Coyote Bookstore, California State University, San Bernardino, 5500 University Parkway, San Bernardino, CA 92407.

Inquiries about admission to the University should be directed to the Director of Admissions and Records, (909) 880-5200, California State University, San Bernardino, 5500 University Parkway, San Bernardino, CA 92407-2397.

BULLETIN

Vol. 25 No. 1 June 1995

Published six times annually; in June, August, November, February and twice in March by California State University, San Bernardino, 5500 University Parkway, San Bernardino CA 92407-2397.

Second class postage paid at San Bernardino, California.

Calendar 1995-96

FALL TERM 1995

June 2	Last day to file or refile graduation check for March graduation without payment of late fee
Aug. 2-23	Fall Quarter 1995 Registration (see <i>Class Schedule</i> for Priority Group times)
Sept. 13	Beginning of academic year
Sept. 21	Classes begin (Saturday classes begin September 24)
Sept. 22-28	Regular add period
Oct. 11	Last day to drop classes without record
Nov. 1	Last day to file or refile graduation check for June and September graduation without payment of late fee
Nov. 3-Dec. 1	Winter Quarter 1996 Registration (see <i>Class Schedule</i> for Priority Group times)
Nov. 23-25	Thanksgiving recess
Dec. 1	Last day of classes (Saturday classes end Dec. 2)
Dec. 4-9	Final examinations
Dec. 12	Grades due; end of term
Dec. 13-Jan. 1	Academic recess

WINTER TERM 1996

Jan. 8	Beginning of winter term
Jan. 8	Classes begin (Saturday classes begin Jan. 6)
Jan. 14-16	Martin Luther King, Jr. birthday recess (no Saturday classes)
Jan. 29	Last day to drop classes without record; late add and late registration period ends
Feb. 9-Mar. 1	Spring Quarter 1996 Registration (see <i>Class Schedule</i> for Priority Group times)
March 1	Last day to file or refile graduation check for December graduation without late fee
March 18	Last day of classes (Saturday classes end March 16)
March 19-23	Final examinations
March 26	Grades due; end of term
March 25-29	Academic recess

Consult the quarterly *Class Schedule* for exact dates of registration for Priority Groups, late schedule adjustments, and last date for refund of fees.

SPRING TERM 1996

April 1	Beginning of academic term
April 1	Classes begin (Saturday classes begin March 30)
April 19	Last day to drop classes without record; late add and late registration period ends
May 31	Last day to file or refile graduation check for March graduation without payment of late fee
May 25-27	Memorial Day (university closed)
June 10	Last day of classes (Saturday classes end June 8)
June 11-15	Final examinations
June 15	Commencement
June 18	Grades due; end of term

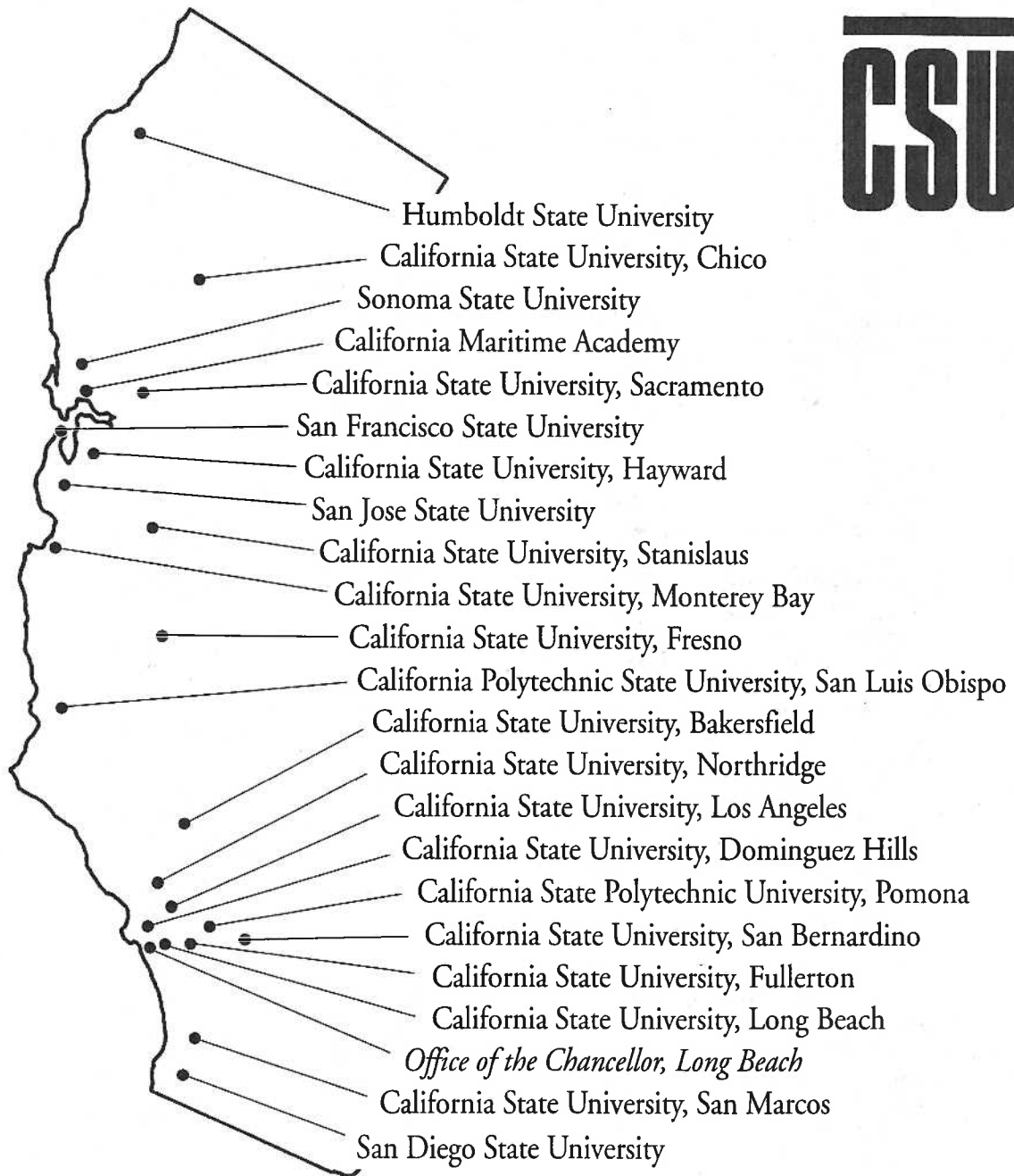
SUMMER SESSIONS 1996

June 18	Registration for all sessions
June 24	Classes begin, Sessions I, IV and V
July 4-5	Independence Day holiday (university closed)
July 29-Aug. 1	Registration, Sessions II and III
July 30	Last day of classes, Session I
July 31-Aug. 1	Final examinations, Session I
Aug. 5	Classes begin, Sessions II and III
Aug. 15	Last day of classes, Session IV
Aug. 19-20	Final examinations, Session IV
Aug. 22	Last day of classes, Session II
Aug. 26-27	Final examinations, Session II
Sept. 3	Last day of classes, Session V
Sept. 4-5	Final examinations, Session V
Sept. 9	Last day of classes, Session III
Sept. 2	Labor Day holiday (university closed)
Sept. 10-11	Final examinations, Session III

FALL TERM 1996

May 31	Last day to file or refile graduation check for March graduation without payment of late fee
Sept. 18	Beginning of academic year
Sept. 26	Classes begin (Saturday classes begin Sept. 28)
Oct. 16	Last day to drop classes without record
Nov. 28-30	Thanksgiving recess
Dec. 7	Last day of classes (Saturday classes end Dec. 2)
Dec. 9-14	Final examinations
Nov. 1	Last day to file or refile graduation check for June or September graduation without payment of late fee

For a more detailed calendar of academic dates and deadlines, see the quarterly class schedule. The above calendar is not intended to be construed as an employee work calendar.



THE CALIFORNIA STATE UNIVERSITY



The California State University

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges and in 1982 the system became The California State University.

The oldest campus, San Jose State University, was founded as a normal school in 1857 and became the first institution of public higher education in California. California State University, Monterey Bay, became the CSU's 21st campus in September 1994. The California Maritime Academy in Vallejo, founded in 1929, joins the CSU as its 22nd campus in July 1995.

Responsibility for The California State University is vested in the Board of Trustees, consisting of ex officio members, alumni and faculty representatives, and members appointed by the governor. The trustees appoint the chancellor, who is the chief executive officer of the system, and the presidents, who are the chief executive officers of the respective campuses.

The trustees, the chancellor and the presidents develop systemwide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the chancellor.

Academic excellence has been achieved by The California State University through a distinguished faculty, whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as broad liberal education. All of the campuses require for graduation a basic program of "general education requirements" regardless of the type of bachelor's degree or major field selected by the student.

The CSU offers more than 1,500 bachelor's and master's degree programs in some 200 subject areas. Many of these programs are offered so that students can complete all upper-division and graduate requirements by part-time, late afternoon and evening study. In addition, a variety of teaching and school service credential programs are available. A limited number of doctoral degrees are offered jointly with the University of California and with private institutions in California.

In fall 1993, the system enrolled approximately 326,000 students, taught by more than 16,000 faculty. Last year the system awarded more than 50 percent of the bachelor's degrees and 30 percent of the master's degrees granted in California. More than 1.2 million persons have been graduated from the 21 campuses since 1960.

Trustees of the California State University

EX OFFICIO TRUSTEES

The Honorable Pete Wilson

Governor of California
State Capitol, Sacramento 95814

The Honorable Gray Davis

Lieutenant Governor of California
State Capitol, Sacramento 95814

The Honorable Willie L. Brown, Jr.

Speaker of the Assembly
State Capitol, Sacramento 95814

Ms. Delaine Eastin

State Superintendent of Public Instruction
721 Capitol Mall, Sacramento 95814

Dr. Barry Munitz

Chancellor of The California State University
400 Golden Shore, Long Beach 90802-4275

APPOINTED TRUSTEES

Appointments are for a term of eight years, except for a student trustee, an alumni trustee, and a faculty trustee whose terms are for two years. Terms expire in the year in parentheses. Names are listed in order of appointment to the Board.

Mr. Roland E. Arnall (1998)

Ms. Marian Bagdasarian (1996)

Ms. Martha C. Fallgatter (1995)

Mr. William D. Campbell (1995)

Mr. Ralph R. Pesqueira (1996)

Mr. Ted J. Saenger (1997)

Mr. Anthony M. Vitti (1997)

Mr. James H. Gray (1998)

Mr. Jim Considine (1994)

Mr. Ronald L. Cedillos (1999)

Dr. Bernard Goldstein (1995)

Mr. William Hauck (2001)

Dr. Joan Otomo-Corgel (2001)

Mr. J. Gary Shansby (1999)

Mr. Christopher A. Lowe (1995)

Mr. Michael D. Stennis (2000)

Mr. Stanley T. Wang (2002)

OFFICERS OF THE TRUSTEES

President: Governor Pete Wilson

Chair: Mr. Jim Considine

Vice Chair: Ms. Martha C. Fallgatter

Secretary-Treasurer: Chancellor Barry Munitz

Correspondence with Trustees should be sent:

c/o Trustees Secretariat

The California State University

400 Golden Shore, Suite 134

Long Beach, CA 90802-4275

Office of the Chancellor of The California State University

400 Golden Shore, Long Beach, CA 90802-4275
(310) 985-2500

Dr. Barry Munitz

Chancellor, CSU System

Ms. Molly Corbett Broad

Executive Vice Chancellor

Dr. Peter S. Hoff

Senior Vice Chancellor, Academic Affairs

Dr. June M. Cooper

Vice Chancellor, Human Resources and Operations

Mr. Richard P. West

Vice Chancellor, Business and Finance

Dr. Douglas X. Patiño

Vice Chancellor, University Advancement

Ms. Christine Helwick

General Counsel (Interim)

Campuses of the California State University

California State University, Bakersfield

9001 Stockdale Highway
Bakersfield, California 93311-1099
Dr. Tomas A. Arciniega, President
(805) 664-2011

California State University, Chico

1st and Normal Streets
Chico, California 95929
Dr. Manuel A. Esteban, President
(916) 898-6116

California State University, Dominguez Hills

1000 East Victoria Street
Carson, California 90747
Dr. Robert C. Detweiler, President
(310) 516-3300

California State University, Fresno

5241 North Maple Avenue
Fresno, California 93740
Dr. John D. Welty, President
(209) 278-4240

California State University, Fullerton

Fullerton, California 92634-9480
Dr. Milton A. Gordon, President
(714) 773-2011

California State University, Hayward

Hayward, California 94542
Dr. Norma S. Reese, President
(510) 881-3000

Humboldt State University

Arcata, California 95521
Dr. Alistair W. McCrone, President
(707) 826-3011

California State University, Long Beach

1250 Bellflower Boulevard
Long Beach, California 90840
Dr. Robert C. Maxson, President
(310) 985-4111

California State University, Los Angeles

5151 State University Drive
Los Angeles, California 90032
Dr. James M. Rosser, President
(213) 343-3000

California Maritime Academy

200 Maritime Academy Drive
Vallejo, California 94590
Dr. Mary E. Lyons, President
(707) 648-4200

California State University, Monterey Bay

100 Campus Center
Seaside, California 93955
Dr. Peter P. Smith, President
(408) 393-3338

California State University, Northridge

18111 Nordhoff Street
Northridge, California 91330
Dr. Blenda J. Wilson, President
(818) 885-1200

California State Polytechnic University, Pomona

3801 West Temple Avenue
Pomona, California 91768
Dr. Bob Suzuki, President
(909) 869-7659

California State University, Sacramento

6000 J Street
Sacramento, California 95819
Dr. Donald R. Gerth, President
(916) 278-6011

California State University, San Bernardino

5500 University Parkway
San Bernardino, California 92407
Dr. Anthony H. Evans, President
(909) 880-5000

San Diego State University

5300 Campanile Drive
San Diego, California 92182
Dr. Thomas B. Day, President
(619) 594-5000

Imperial Valley Campus

720 Heber Avenue
Calexico, California 92231
(619) 357-3721

San Francisco State University

1600 Holloway Avenue
San Francisco, California 94132
Dr. Robert A. Corrigan, President
(415) 338-1111

San Jose State University

One Washington Square
San Jose, California 95192
Dr. Robert L. Caret, President
(408) 924-1000

California Polytechnic State University, San Luis Obispo

San Luis Obispo, California 93407
Dr. Warren J. Baker, President
(805) 756-1111

California State University, San Marcos

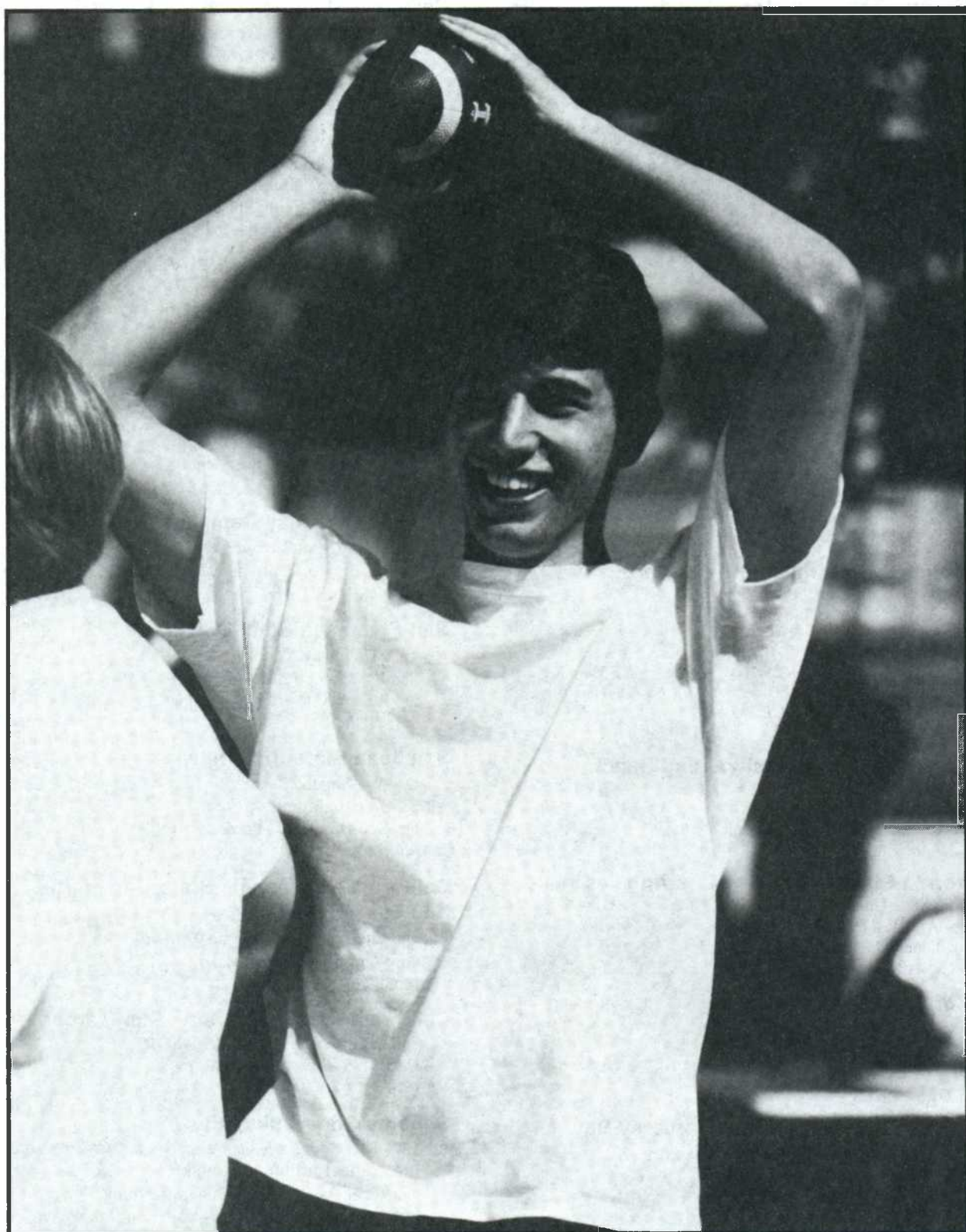
San Marcos, California 92096-0001
Dr. Bill W. Stacy, President
(619) 752-4000

Sonoma State University

1801 East Cotati Avenue
Rohnert Park, California 94928
Dr. Ruben Armiñana, President
(707) 664-2880

California State University, Stanislaus

801 West Monte Vista Avenue
Turlock, California 95380
Dr. Marvalene Hughes, President
(209) 667-3122



California State University, San Bernardino

Mission and Goals

The mission of California State University, San Bernardino is to enhance the intellectual, cultural and personal development of its students. Serving inland Southern California, in one of the fastest growing regions in the nation, the university seeks to serve the educational needs of the region and the state by offering a wide range of academic programs and support services. The overall goal is to prepare students to assume leadership roles in the 21st century.

The teaching and learning environment for students is enhanced by close contact with faculty, staff, and administrators in state-of-the-art facilities and through extracurricular activities offered outside of the classroom. In order to provide a truly comprehensive education for its students, the university has built programs and services based upon six objectives:

- Provide a sound program of general education in the arts and sciences for all undergraduates,
- Include experiential approaches to learning for undergraduate and graduate students,
- Foster an open exchange of ideas and views,
- Encourage and support faculty to remain current in the fields that they teach,
- Enrich students' lives outside of class by sponsoring speaker programs, supporting clubs and other organizations, and encouraging a variety of cultural events,
- Build partnerships with the communities throughout the region in order to identify and solve mutual concerns and problems.

To achieve these aims, the university continues to develop academic programs and services that assist people who use the campus to gain the skills and information that they need to improve their quality of life and to plan for productive futures. The university offers a large number of professional, occupational, and traditional academic programs at both the baccalaureate and master's level, so that new and returning students can gain up-to-date skills and knowledge. To foster excellence and anticipate the needs of our service region, the university has identified six programmatic areas beyond its traditional liberal arts curricula for continued emphasis and expansion:

- Education programs to prepare teachers to serve a multicultural society,
- Applied science and engineering programs to support technology development in southern California,
- Management and administration programs to graduate future business and public agency leaders,
- Health and helping professions to support the burgeoning population in our service area,
- International studies to prepare graduates to function in a truly global community, and
- Fine and performing arts to enrich our lives.

The university seeks also to expand its role as one of the preeminent centers of cultural and intellectual activity in inland Southern California. Faculty, staff, administrators, and students sponsor conferences, institutes, workshops, exhibitions, and other continuing education activities. New programs—enhanced by new facilities—in the arts, infor-

mation sciences, social sciences, extended education, and athletics will allow the university to offer a greater range of plays, concerts, art exhibitions, sports events, museum exhibitions, speakers, and academic offerings for its students and the community at large.

California State University, San Bernardino recognizes that one of its strengths is the diversity of the university community. As a result, the university has developed curricula and services that affirm the multiculturalism of this region and show the dignity and values that unite all people.

Faculty, administrators, and staff know, too, that the university serves not just traditional full-time students but others who attend part-time because of responsibilities at home and at work. In fact, because many students begin their higher education elsewhere, the university continually updates its transfer agreements with surrounding colleges and universities. Furthermore, to help all students complete their programs of study, the university offers both day and evening classes on campus as well as selected programs at a few off-campus sites, including a permanent campus in the Coachella Valley. Additionally, innovative uses will be made of technology to serve its many student populations throughout the Inland Empire.

With outstanding faculty, administrators, and staff from around the nation and the world, the university is fully prepared to instruct and support its diverse student body and to serve the region's intellectual and cultural needs. Through excellence in the pursuit of learning, the university enriches both itself and the communities it serves.

The above Statement of Mission and Goals was approved by the Faculty Senate and President Anthony H. Evans in November, 1993.

Location and History

The city of San Bernardino is situated at the foot of the San Bernardino Mountains, which form the northeastern boundary of the San Gabriel Valley. The valley's western terminus, 60 miles away, is the Los Angeles basin and the beaches of the Pacific Ocean.

In earlier times the San Bernardino area was the home of Serrano, Luiseno and Cahuilla Indians. The first pioneers from Mexico settled in the San Gabriel Valley in the 1770s. Mission San Gabriel was founded by Fr. Junipero Serra in 1771, ten years before pueblo Los Angeles was established. The mission built a fortified asistencia near modern San Bernardino in 1819, but this was abandoned in 1834 when newly independent Mexico secularized the missions.

In 1842 the Lugo family purchased the 37,000-acre San Bernardino Valley. A group of Mormon colonists came to the valley in 1851, purchased the Lugo Rancho and built a stockade near the present county courthouse. A village developed around the stockade and this, coupled with California statehood, led to the establishment of San Bernardino County in 1853 and the incorporation of the city of San Bernardino in 1854. Connection to the trans-continental railroad in 1885 recognized the valley's importance and insured its future growth and prosperity.

Inland Southern California

Historic San Bernardino Valley is part of inland Southern California, an area encompassing all of San Bernardino and Riverside counties. The university is within the Riverside-San Bernardino-Ontario metropolitan area and serves as well more distant locations in the two counties—the Colorado River communities of Blythe and Needles; the high desert area including Victorville and Barstow; the low desert, Coachella Valley region including Palm Springs and Indio; the mountain communities of Big Bear, Lake Arrowhead and Idyllwild; the Hemet Valley, including Hemet, San Jacinto and Perris.

ADVISORY BOARD

Edward G. Hill, Jr.
San Bernardino
Chair of the Board

Bruce Bartells
Redlands

Marion Black, Jr.
Rialto

Robert Botts
San Bernardino

Nicholas Coussoulis
Lake Arrowhead

Gloria Cutler
Rancho Cucamonga

Edward Dunagan
Adelanto

Ted Dutton
Lake Arrowhead

Ronald Evans
Glendora

Dr. Luis Gomez
Yucaipa

Lynn Hirtz
Rialto

Dr. Don Iman
Moreno Valley

Dr. Taewoong Kim
Apple Valley

James Mulkey
Lucerne Valley

Gerald Newcombe
Rim Forest

Richard Oliphant
Palm Desert

Kenneth Patterson
San Bernardino

Dr. Robert Percy
Highland

James Previti
Rancho Cucamonga

Ray Quinto
Yucaipa

Larry Sharp
San Bernardino

Elise Traynum
Riverside

Bruce Varner
San Bernardino

Paul Woodruff
Redlands

Administrative Officers

President Anthony H. Evans, Ph.D.

Vice President for Academic Affairs Louis Fernández, Ph.D.

Associate Vice President, Academic Personnel J. Cordell Robinson, Ph.D.
 Associate Vice President, Academic Programs Jerrold Pritchard, D.M.A.
 Dean, School of Business and Public Administration Eldon Lewis, Ph.D. (Interim)
 Dean, School of Education Phyllis Fernlund, Ph.D. (Acting)
 Dean, School of Humanities Beverly L. Hendricks, Ph.D.
 Dean, School of Natural Sciences Klaus Brasch, Ph.D. (Acting)
 Dean, School of Social and Behavioral Sciences Ellen Gruenbaum, Ph.D. (Acting)
 Dean, Undergraduate Studies Charles Martin, Ph.D.
 Associate Dean, Educational Support Programs Tom M. Rivera, Ed.D.
 Director, Educational Opportunity Program Taft Newman, M.S.
 Director, Research and Policy Analysis Walter Hawkins, M.S.W.
 Director, S.A.I.L. Program Norma Romero, B.A.
 Director, Learning Center Cynthia Linton, B.A.
 Director, Advising and Academic Services Raymond Navarro, M.B.A.
 Dean, Graduate Studies Julius Kaplan, Ph.D.
 Director, Research and Sponsored Programs Samuel S. Kushner, M.A.
 Dean, Extended Education Lee Porter, Ed.D.
 Associate Dean, Extended Education Jan Jackson, Ph.D.
 Dean, Coachella Valley Center Peter A. Wilson, Ph.D.
 Director, Institutional Research Robert A. Schwabe, Ph.D.
 Associate Director, Institutional Research Ross Moran, Ph.D.

Vice President for University Relations Judith M. Rymer, Ph.D.

Director, Athletics Nancy Simpson, M.S.
 Director, Alumni Affairs and Annual Fund Pamela D. Langford, M.B.A.
 Director, Public Affairs Cynthia Pringle, B.A.
 Executive Director, University Development Stephen D. Christensen, B.A., CFRE
 Director, Advancement Operations Mary Colacurcio, B.A.

Vice President for Information Resources and Technology William Aguilar, Ph.D.

University Librarian Johnnie Ann Ralph, M.L.S.
 Head, Automation Services Buckley Barrett, M.S.
 Head, Public Services Les Kong, M.L.S.
 Head, Technical Services Michael Burgess, M.S.
 Director, Academic Computing and Media Susan Cooper, Ph.D.
 Director, Administrative Computing and Telecommunications Daniel C. Ashley, M.B.A.
 Manager, Systems and Programming Lorraine M. Frost, M.A.
 Manager, Telecommunications and Networks C. Donald McKenzie, M.B.A.

Vice President for Student Services Frank Rincón, Ph.D.

Director, Student Life	Randy Harrell, M.A.
Director, Children's Center	Kimberly Harris, M.A.
Student Services Counselor and Coordinator, Student Conduct	Craig Henderson, Ph.D.
Director, Counseling and Health Services	John M. Hattton, Ph.D.
Associate Vice President for Enrollment Services	Cheryl Smith, M.B.A.
Director, Admissions and Records	Lydia Ortega, B.S.
Director, Financial Aid	Ted Krug, M.A.
Director, International Student Services	Elsa Fernandez, M.A.
Director, Outreach Services	Cheryl Smith, M.B.A.
Director, Upward Bound	Denise Benton, B.A.
Assistant Vice President for Student Services	Randy Harrell, M.A.
Director, Career Development Center	Patricia Rodgers Gordon, M.S.
Director, Housing	Norm Slosted, M.A. (Acting)
Director, Services to Students with Disabilities, National Student Exchange	Terry Rizzo, Ph.D. (Acting)
Director, Student Union	Helga Lingren, M.P.A.

Vice President for Administration and Finance David DeMauro, M.B.A.

Associate Vice President for Financial Operations	William Takehara, M.B.A.
Budget Analyst	Andrea Beechko, M.B.A.
Director of Accounting	Daryl Anderson, M.B.A.
Assistant Director of Accounting	Suzanne Bolowich, B.S.
Manager, Payroll Operations	Teri Allen
Support Services Officer	Janice L. Lemmond, B.A.
Manager, Duplicating Center	James R. Gooch
Manager, Purchasing	Kathy Shepard, M.A.
Manager, Receiving/Mail Services	Michael Arredondo
Director, Public Safety	Stephen Nowicki, M.P.A. (Acting)
Manager, Parking Services	Harry Larsen, B.A.
Director, Physical Planning and Development	William F. Shum, M.Arch.
Director, Human Resources	Dale T. West, B.S.
Assistant Director	Karen Logue, M.A.
Personnel Management Specialist	Twillea Carthen, M.P.A.
Benefits Officer	Diana Gomes
Director, Physical Plant	Jim Hansen
Associate Director, Physical Plant	Tony Simpson
Supervisor, Building Trades	David F. Schiermeyer
Chief Engineer, Heating and Air	LeRoy Wilkie
Supervisor, Grounds	Paul Frazier
Chief, Custodial Services	Michael V. Benton
Environmental Health and Safety Officer	Tony Ichsan, B.S.
Executive Director, Foundation and Director, Administrative Services	Arthur M. Butler, B.A.
Business Services Director, Foundation	Beverly A. Smith, B.A.
Manager, Coyote Bookstore	Carol A. Dunlap
Manager, Food Service	Keith Ernst, B.A.



The University Academic Program

Now in its third decade, California State University, San Bernardino continues its development in new directions.

The college opened in 1965, offering six degree programs to approximately 300 students and focusing on the liberal arts. Currently the curriculum has been expanded to 42 baccalaureate degree programs, 15 teaching credential fields and various options within 20 master's degree programs. Current enrollment exceeds 11,500.

While continuing to emphasize the liberal arts, the university has implemented a number of career-oriented programs, both at the undergraduate and at the graduate levels.

Academic Plan

California State University, San Bernardino operates on the quarter system. The fall, winter and spring terms each consist of 10 weeks of instruction plus a final exam week. During the summer, several short, intensive sessions are offered by the Office of Extended Education which charges higher fees than the normal academic year as it is not supported by state taxes.

Most lecture/discussion courses are offered for four units of credit and meet four hours per week. Each unit of credit typically requires two hours of out-of-class study and preparation in addition to the hour of direct instruction in the class. Laboratories and activity-based courses, such as studio art, music, physical education, computer science, etc. meet for 2-3 hours a week of instruction for each unit of credit. Students transferring from a semester system campus should note semester courses are five weeks longer (15 weeks versus 10) so that a quarter unit is equal to 2/3 of a semester unit. (Thus, three semester units are equivalent to 4.5 quarter units.)

The total number of quarter units required for graduation varies from a minimum of 186 for the Bachelor of Arts degree to 198 units for the Bachelor of Science. Students planning to graduate in four years need to take an average of 15-16 units per quarter to reach 186 units. Master's degrees require a minimum of 45 units, but some professional degrees, such as the M.S.W. in Social Work and M.S. in Psychology, have licensing and/or accreditation standards demanding up to 90 units.

Baccalaureate Degree Programs

In the 1995-96 academic year, the university will offer bachelor's degree programs in the following fields (majors):

School of Business and Public Administration

Administration*	B.A./B.S.
accounting	
business economics	
finance	
information management	
international business	
management	
management science	
marketing	
production/operations management	
public administration	
small business management	

School of Humanities

Art*	B.A.
Communication*	B.A.
human communication	
mass communication	
public argumentation and rhetoric	
English*	B.A.
literature	
creative writing	
French*	B.A.
Music*	B.A.
music education	
specialized music studies	
general music studies	
Philosophy*	B.A.
Spanish*	B.A.
business	
language	
literature	
Theatre Arts*	B.A.

School of Natural Sciences

Biology*	B.A./B.S.
Chemistry*	B.A./B.S.
biochemistry	
Computer Science *	B.S.
Foods and Nutrition*	B.S.
Geology	B.S.
Health Science*	B.S.
community health education and promotion	
environmental health science	
health administration and planning	
school health	
Mathematics*	B.A./B.S.
Nursing	B.S.
Physical Education*	B.S.
Physics*	B.A./B.S.

School of Social and Behavioral Sciences

Anthropology*	B.A.
museum studies	
Criminal Justice*	B.A.
paralegal studies*	
Economics*	B.A.
Geography*	B.A.
History*	B.A.
Political Science*	B.A.
Psychology*	B.A.
Social Sciences	B.A.
Sociology*	B.A.

Interdisciplinary Programs

American Studies	B.A.
Environmental Studies	B.A.
Human Development	B.A.
child development	
gerontology	
Human Services	B.A.
Liberal Studies	B.A.
liberal studies bilingual/cross-cultural studies	
Special Major	B.A.
Vocational Education	B.S./B.V.E.

* program also has a minor available

Graduate Programs

In the 1995-96 academic year, the university will offer master's degree programs in the following fields:

Biology, M.S.
Business Administration, M.B.A.
finance
management and human resources
information management
marketing management
production and operations management
professional accounting
Computer Science, M.S.
Counseling and Guidance, M.S.
Criminal Justice, M.A.
Education, M.A. with options in:
bilingual/cross-cultural education
educational counseling
elementary education
environmental education
instructional technology
middle grades
reading/language arts
secondary education
English for secondary teachers
history for secondary teachers
physical education for secondary teachers
Spanish for secondary teachers
special education
teaching English as a second language
vocational education
Educational Administration, M.A.
English Composition, M.A.
English composition
teaching English as a second language
Health Services Administration, M.S.
Interdisciplinary Studies, M.A.
Mathematics, M.A.
National Security Studies, M.A.
Psychology, M.A.
general psychology
life-span psychology
Psychology, M.S.
clinical/counseling psychology
industrial/organizational psychology
Public Administration, M.P.A.
Rehabilitation Counseling, M.A.
Science, M.A.T.
Social Sciences, M.A.
Social Work, M.S.W.
Urban Planning, M.U.P.

Programs Under Development

The university is planning to offer the following programs in the future pending official authorization by the CSU Chancellor's Office.

<u>Degree</u>	<u>Contact</u>
Art, M.A.	Art Department
Communication, M.A.	Communication Studies Department
English, M.A.	School of Humanities
Physical Education, M.A.	School of Natural Sciences

Class Size

A distinctive feature of the San Bernardino plan is the attempt to offer the majority of courses in a small lecture/discussion/seminar format. Currently approximately 70 percent of the courses are taught in this arrangement. This small class size increases the possibilities for discussion and for student-faculty contacts both within and outside the classroom.

To maintain the small class as the norm requires that a small proportion of courses be offered in an intermediate size (enrollment of 30 to 72) or in a large-lecture format (maximum enrollment of 250).

Among lower-division general education courses, those in the basic skills area, in foreign language, mathematics and in English are offered mostly through small classes, while those in other areas employ intermediate or large-lecture classes. Upper-division general education courses are also offered in the large-lecture format. Each department utilizes intermediate size classes for a small number of required or elective courses, but the majority of departmental offerings are in small classes. The typical laboratory section has a maximum enrollment of 24, sometimes less.

Faculty Office Hours

In addition to meeting with students during designated class hours, faculty members hold regularly scheduled office hours, which are posted outside their offices. A student who is unable to see a faculty member during class or the posted office hours may arrange an appointment by contacting the appropriate department office.

Accreditation

California State University, San Bernardino is accredited by the Western Association of Schools and Colleges, the official accrediting body for institutions of higher learning in the West. The teaching credential programs are approved by the California State Board of Education and Commission on Teacher Credentialing.

The following professional programs have received specialized approval or accreditation from organizations recognized by the national Council on Postsecondary Education:

- Administration (BA, BS, MBA)—American Assembly of Collegiate Schools of Business
- Art (BA)—National Association of Schools of Art and Design
- Chemistry (BS)—American Chemical Society
- Computer Science (BS)—Computer Science Accreditation Commission of the Computing Sciences Accreditation Board

- Foods and Nutrition (BS)—American Dietetics Association (Plan V, Didactic Program in Dietetics)
- Public Administration (MPA)—National Association of Schools of Public Administration and Affairs
- Nursing (BS)—National League of Nursing
- Rehabilitation Counseling (MA)—Council on Rehabilitation Education
- Social Work (MSW)—Council on Social Work Education

University Honors Program

The University Honors Program stands for an education that will give each student the opportunity to explore ideas and principles underlying the major areas of modern knowledge, the understanding that learning is a continuous lifetime process, and the courage and enthusiasm to participate in the creation of a better world. This program offers integrated courses and other enrichment opportunities for highly-motivated students who seek an intellectual challenge. Most honors courses fulfill the general education requirements which all students at the university must meet.

Students who have shown scholastic ability, intellectual promise, and creativity are encouraged to apply for the program. Further information about the Honors Program can be obtained through the Office of the Dean of Undergraduate Studies, University Hall, Room 368, 880-5032.

Phi Kappa Phi

The university has an active chapter of the national honor society of Phi Kappa Phi, whose purpose is the recognition and encouragement of superior scholarship in all academic disciplines. Membership is by invitation issued to selected juniors, seniors and graduate students who have excelled in scholarship and who meet the chapter's requirements.

Coachella Valley Campus

Residents of the Coachella Valley and surrounding communities can now complete a B.A., M.A. or teaching credential program without driving long distances. Cal State, San Bernardino opened a satellite campus at College of the Desert in fall of 1986, and the two institutions are working in partnership to provide affordable higher education. College of the Desert provides freshman and sophomore-level course work, while the university's Coachella Valley Campus (as the satellite is called) offers junior, senior and graduate level classes in a variety of programs. Degree and credential programs which can be completed in their entirety at the Coachella Valley Campus include the following:

- Administration (B.A.)
 - Management
 - Small Business Management
- Administration (B.S.)
 - Accounting
 - Administrative Services (Credential)
- Education (M.A.)
 - Bilingual/Cross-Cultural Option
 - Educational Counseling Option

Reading Option
 Special Education Option
 Educational Administration (M.A.)
 English (B.A.)
 Liberal Studies (B.A.)
 Multiple Subject (Credential)
 Paralegal Studies (Certificate)
 Public Administration (M.P.A.)
 Pupil Personnel Services (Credential)
 Psychology (B.A.)
 Single Subject (Credential)

Like the main campus, the center is on the quarter system, and students can enroll either exclusively in Coachella Valley, or can combine San Bernardino and Coachella classes. Admissions information, course registration, academic advising, and a variety of student services are available at the satellite campus.

The Coachella Valley Campus is located on the College of the Desert property (across from the football stadium) at 43500 Monterey Avenue, Palm Desert. Both daytime and evening classes are offered. For further information, please call the center at (619) 341-2883.

Special Courses

More specific information on the special courses described below can be obtained from the Office of Academic Programs or the appropriate schools and departments.

Comprehensive Examinations. Students now have limited opportunities to spend a full term out of the classroom while preparing for comprehensive examinations that serve as alternatives to regular instruction. Comprehensive examinations are currently available in psychology and sociology.

Cooperative Education. The university is developing ways in which students may earn course credit through academically related work experience. Currently available are internship courses in administration, anthropology, art, biology, chemistry, communication, computer science, criminal justice, economics, English, finance, geography, history, health science, information science, industrial technology, management, marketing, management science, public administration, paralegal studies, political science, psychology, sociology and Spanish.

Self-Paced Courses. An alternative mode of instruction, being developed for a few courses, enables students to set their own learning pace. Some of these, such as French 101, 102, 150, involve some classroom work. Others—such as Accounting 211, 212; Anthropology 335; Criminal Justice 340; Finance 313; Management Science 210 and 304; Psychology 385 and Social Sciences 215—are conducted on an independent study basis made possible through the use of study guides, video tapes and other instructional resources.

Facilities

The campus of California State University, San Bernardino blends modern facilities with wide expanses of well maintained landscapes, and panoramic views. As such, the Pfau Library Mall has undergone extensive new landscaping, providing a beautiful, multifunctional, open space setting to enhance university life.

The 430-acre campus features more than 28 fully accessible and air-conditioned buildings. In addition to classrooms and laboratories for course work in the arts, letters and sciences, the university has a number of rather distinctive facilities, such as simulation laboratories, a modern instructional television studio lab, an electronic music studio, glass blowing facilities and state-of-the-art self-instructional computer laboratories located in each of the major instructional buildings.

The university, experiencing an enrollment-driven expansion, enhanced the physical plant with the University Hall building, opening its doors in the fall of 1991, and the Foundation Building completed in winter of 1992.

In response to a demand for more facilities, completed construction includes the Jack H. Brown Hall building which houses the School of Business and Public Administration, the Department of Computer Science and the Department of Mathematics.

The Student Union addition opened its doors in fall 1993, providing space for a new Pub, multipurpose room, lounges, meeting rooms, and Associated Student offices. Also, a large addition to the Coyote Bookstore was opened in fall, 1993.

The campus expansion also includes the John M. Pfau Library addition, doubling the current building floor space, which opened in fall, 1994. Besides greatly increasing library space, the building will house the Information Resources and Technology Division which includes the Academic Computing and Media Department, the Administrative Computing and Telecommunications Department, and additional self-instructional computer labs.

Scheduled to open in Winter, 1995, the new Health/PE/Classroom/Faculty Office Complex with a 5,000-seat gymnasium, will also provide three basketball cross-courts, dance studio, sports medicine room, a weight training room, an outdoor twenty-five meter competition pool, and additional outdoor facilities. This facility will house the Aerospace Studies, Nursing, Military Science, Health Science, and Physical Education departments, with additional lecture space and self-instructional computer labs.

Other construction, scheduled for occupancy in 1995/1996, will be the Extended Education Facility and the Visual Arts Building. Other construction projects anticipated in the near future include: Corporation Yard and Administrative Services Building; School of Education Building; and a School of Social and Behavioral Sciences complex.

University Library

The Pfau Library consists of a general collection of 580,000 books and bound periodicals. The Library subscribes to more than 1,600 periodicals, newspapers and other serial publications. The book collection is further augmented by musical scores, maps, microformat materials, pamphlets, curriculum materials, CD ROMs and data base search service. The Library's card catalog has recently been replaced by a computerized catalog, KeyNOTIS. As a depository for California state documents, the Library regularly receives state publications. Reciprocal borrowing agreements with other area libraries further enhance the availability of material.

All materials are easily accessible to students. An open shelf arrangement of the collection gives users convenient access to Library materials. The Library occupies the first, second (in the Addition only), third, fourth and fifth floors and parts of the basement of the Pfau Library Building. Special facilities include photo-duplicating service, microform readers, map room, listening facilities, individual study carrels (some with power to accommodate lap-top computers), group study rooms, a curriculum lab and seating for about 1,200 users. Individual or class instruction in Library usage is available upon request. Resource handouts are available at the reference desk.

Administrative Computing and Telecommunications

Administrative Computing manages those systems resources which are used in the day-to-day operation of the university among others. These include the student registration system, grades, financial aid, computerized test scoring, and the voice response system for registration. In addition, Administrative Computing installs and maintains computerized office systems which serve all campus offices, including Admissions and Records, Financial Aid, Accounting, Alumni, the Bursar's Office, Academic Affairs and others.

Telecommunications manages the telephone, voice data communications networks. Consisting of optical fiber, twisted pair, and coaxial cable, these networks connect most users on campus to a central mainframe and offers a full range of Internet services including electronic mail. In addition, real-time compressed video links are available to classrooms located off-campus to assist in the university's mission of providing service to the surrounding communities.

Academic Computing and Media

Academic Computing manages instructional computing resources, provides computing consultation and professional development courses on software applications, creates and maintains documentation, provides a collection of manuals on software packages, and publishes a quarterly newsletter in collaboration with other departments in Information Resources and Technology.

In addition, Academic Computing provides access to microcomputer laboratories for students, faculty and staff. The facilities located in University Hall, and the Library Extension offer a wide range of computing resources and experiences. There are four self-instructional labs located in University Hall and four additional labs planned for the Library Extension. Microcomputer labs affiliated with the five schools are located within various buildings on the campus. The self-instructional labs are networked, allowing easy access to word processing, data base, spreadsheet, statistical and telecommunications software. Professional staff and student consultants are available in the labs to assist patrons with their computer assignments. Supported platforms include Macintosh, MS-DOS, and Unix.

Electronic mail for students is facilitated by a Sunsparc 20 while electronic mail for faculty is facilitated by a Sun Sparcstation and a Data General Avion. Academic Computing also provides access to other computer systems and

information resource centers at other CSU campuses, including a Cray Y/MP supercomputer system at the San Diego Supercomputer Center. Connections to other campuses are handled through the CSUNET, a state-wide high speed communications network. Connections with computer systems at other universities are possible through Internet.

Media Services provides faculty and students a variety of equipment, materials, production and advisory services. These include: audio and video equipment delivery, equipment repair, media production, photography, graphic design, multimedia production, signage, distance learning classrooms, teleconferencing and video retrieval.

Scheduling of Classes

Most four-unit courses meet for 200 minutes per week. Three basic plans are used in scheduling classes: three meetings per week (usually Monday-Wednesday-Friday), two meetings per week or one meeting. Principal exceptions occur among laboratory, activity and studio courses and courses which carry less than four units of credit.

The two-period, two-day-per-week format is utilized for Tuesday-Thursday classes and most late afternoon and evening courses; the single four-hour period format has been found most appropriate for certain evening and weekend classes. The university attempts to maintain accurate information about changing student needs and to adjust its class schedule accordingly.

Late-Day Classes

Courses offered in the late afternoon and evening are in every respect the equal of courses offered earlier in the day; they have identical prerequisites and requirements and they confer equal credit. Late-day classes have proved to be of convenience to regular and part-time students, teachers, business people and others in the community. The proportion of late-day classes has been increasing and stands currently at more than one-third of all classes.

Degree Completion Programs for Part-Time Students

Increasing opportunities are being developed for part-time students to complete baccalaureate and master's degree programs by attending late-day classes.

Presently offered in the late afternoon and evening is a sufficient range of upper-division course work to complete a major in administration, criminal justice, economics, English, geography, health science, history, human development, humanities, human services, liberal studies, mathematics, nursing, psychology, social sciences, sociology, Spanish and vocational education. At the graduate level, master's degree programs are available in business administration, public administration, biology, education, rehabilitation counseling, criminal justice, English composition and health services administration.

Students who wish to pursue a late-day degree-completion program in other fields should consult with the department of their proposed major regarding the availability of required courses and then apply for admission to the university in the usual manner.

Institutes

The university sponsors the following institutes which are interdisciplinary in nature and are comprised of faculty from a number of different schools.

Behavioral Health Institute. Director, Elizabeth Klonoff, Department of Psychology, 880-5584. Established to provide a central clinical, research, and training location for professional health service practitioners, scholars, students and teachers as well as a forum within which issues related to health and health-related behaviors can be explored.

Institute for Science Education. Director, Herb Brunkhorst, Department of Secondary and Vocational Education, 880-5613. Established to promote the improvement of science education in addressing the needs for professional preparation in the sciences and scientific literacy for citizenship and to promote the utilization of science education as an interface between science and society.

Institute for Applied Research and Policy Analysis. Directors, Shel Bockman, Department of Management, 880-5733, and Barbara Sirotnik, Department of Information and Decision Sciences, 880-5729. Established to meet the information needs of policy and decision makers in the Inland Empire, conducting applied business, social and public policy research, and offering research and related consulting services to the community, CSUSB faculty and centers on the CSUSB campus.

Centers

Individual academic schools sponsor the following centers on campus. For further information, contact the director listed.

Inland Empire Management Center. Director, Bryan Pettit, Department of Information and Decision Sciences, 880-5727. Representing the School of Business and Public Administration, the IEMC conducts seminars, short courses, contract classes, and conferences, provides management consulting by faculty and performs regionally specific applied research for the community.

Center for Research in Integrative Learning and Teaching. Executive Director, Renate Caine, Department of Secondary and Vocational Education, 880-5618. Established to conduct research and develop models which acknowledge the "multiple and complex patterns" inherent in the teaching learning process; to provide both faculty and the community with "state of the art" developments in education and educational evaluation; and to serve as a conduit to other educational institutions and organizations.

Center for Equity in Education. Director, Esteban Diaz, Department of Elementary and Bilingual Education, 880-5621. Established by faculty of the School of Education to address issues related to providing equitable education for students at all levels of the educational system. Of special concern are public school students who are from different linguistic and cultural backgrounds or who have special educational needs.

Center for Economics Education. Director, Jim Charkins, Department of Economics, 880-5553. Estab-

lished to train teachers in the economics method of thinking so that their students will become better informed concerning the economy in which they live, the relationship of the U.S. economy and the world economic system, and the economics of various social and political issues.

Center for the Enhancement of Math Education. Director, Joan Hallett, Department of Mathematics, 880-5368. Established to serve as a vehicle for identifying, analyzing, and addressing the needs of mathematics teachers in the service area.

Center for Applied Science. Established to promote applications of science to real or possible problems of importance to the community and training of students in research to continue to advance the applications of science.

Center for Prose Studies. Director, Bruce Golden, Department of English, 880-5832. Established to remedy the lack of a rigorous collective effort devoted to the "product" of expository writing instruction—the prose itself.

Center for the Study of Correctional Education. Directors, Carolyn Eggleston and Thom Gehring, Department of Advanced Studies in Education, 880-5654 or 880-5653. Established to serve teachers who work in prisons and juvenile institutions. Center activities include a planned master's degree in correctional education, research, and professional development with an emphasis on networking across jurisdiction and national boundaries.

International Programs

Developing intercultural communication skills and international understanding among its students is a vital mission of The California State University (CSU). Since its inception in 1963, the CSU International Programs has contributed to this effort by providing qualified students an affordable opportunity to continue their studies abroad for a full academic year. Close to 11,000 CSU students have taken advantage of this unique study option.

International Programs participants earn resident academic credit at their CSU campuses while they pursue full-time study at a host university or special study center abroad. The International Programs serves the needs of students in over 100 designated academic majors. Affiliated with 36 recognized universities and institutions of higher education in 16 countries, the International Programs also offers a wide selection of study locales and learning environments.

Australia	The University of Western Sydney
Brazil	Universidade de São Paulo
Canada	The universities of the Province of Quebec (13 institutions, including Université de Montréal, Concordia University, Université Laval, McGill University, Université du Québec system, Bishop's University, <i>i.a.</i>)
Denmark	Denmark's International Study Program (the international education affiliate of the University of Copenhagen)
France	Institut des Etudes Françaises pour Étudiants Étrangers, Université de Droit, d'Économie et des Sciences D'Aix-Marseille (Aix-en-Provence)

	Mission interuniversitaire de coordination des échanges franco-américains, Universités de Paris III, V, VI, VIII, X, XI, XII, XIII
Germany	Ruprecht-Karls-Universität (Heidelberg) and Eberhard-Karls-Universität (Tübingen)
Israel	The Hebrew University of Jerusalem
Italy	CSU Study Center (Florence), Università degli Studi di Firenze, and La Accademia di Belle Arti di Firenze
Japan	Waseda University (Tokyo)
Mexico	Universidad Iberoamericana (Mexico City)
New Zealand	Lincoln University (Christchurch) and Massey University (Palmerston North)
Spain	Universidad Complutense de Madrid and Universidad de Granada
Sweden	Uppsala Universitet
Taiwan	National Chengchi University (Taipei)
United Kingdom	Bradford University, Bristol University, Kingston University, Sheffield University, and University of Swansea
Zimbabwe	University of Zimbabwe (Harare)

The International Programs pays all tuition and administrative costs for participating California resident students to the same extent that such funds would be expended to support similar costs in California. Participants are responsible for all personal costs, such as transportation, room and board, living expenses, and home campus fees. Participants remain eligible to receive any form of financial aid (except work-study) for which they can individually qualify.

To qualify for admission to the International Programs, students must have upper division or graduate standing at a CSU campus by the time of departure. Students at the sophomore level may, however, participate in the intensive language acquisition programs in France, Germany, and Mexico. California Community Colleges transfer students are eligible to apply directly from their community college if they can meet this requirement. Students must also possess a current cumulative grade point average of 2.75 or 3.0, depending on the program for which they apply. Some programs also have language study and/or other coursework prerequisites.

Additional information and application materials may be obtained from Dr. Aurora Wolfgang, Foreign Language Department on campus or by writing to the California State University International Programs, 400 Golden Shore, Suite 122, Long Beach, California 90802-4275. Applications for the 1996-97 academic year overseas must be submitted by February 1, 1996.

London Business Program

All business or pre-business students with a 2.0 grade point average or higher are eligible to take classes with CSU faculty in London for either a fall or winter quarter. The CSU system has a partnership program with AIFS, the American Institute for Foreign Study, which arranges

housing, and has an extensive social and cultural program. Students take regular CSU classes, usually at the junior or senior level. Classrooms are located at the University of London, Bloomsbury campus. The British Museum and Library, as well as other London landmarks, are nearby.

For additional information contact Joe Lovell, Department of Management, at 880-5740.

National Student Exchange Program

California State University, San Bernardino is a member of this cooperative program which allows selected students to spend up to a year at one of 103 colleges in more than 45 states. The exchange student pays either normal California State University, San Bernardino fees or "in state" tuition at the host institution.

This exchange encourages students to see another part of their own country, live and work in a different academic environment, and pursue specialized courses not offered at Cal State. All course work taken while on exchange is approved by an advisor and then evaluated by the records office *before* leaving campus. Thus, there is no loss of time or credits.

Students normally apply in the winter of their freshman or sophomore year and are screened and placed during March for the next academic year. To qualify, students must have a 2.5 grade-point average. For information and applications, contact Theron Pace in University Hall, Room 235 or telephone 880-5238.

University Foundation

The Foundation is a nonprofit self-financed corporation chartered to assist the university in fulfilling its mission. It oversees non-appropriated revenues derived from the administration of grants, research and external contracts, manages investments and the endowments, administers scholarships, manages the university's commercial operations including the Coyote Bookstore and the Foundation Food Service, and provides administration of community-oriented conferences and workshops. The Foundation is governed by a Board of Trustees whose membership is drawn from the community, administration, faculty and student body. Its operations are managed by an executive director and a professional staff. During the 1993-94 academic year, the Foundation administered revenues in excess of \$15.9 million and a payroll of 838 full and part-time employees.

CSU Desert Studies Center

The Desert Studies Center, a desert field station, is available for use by CSU faculty, students and other universities and agencies. The center is located in the Eastern Mojave Desert, eleven miles southwest of Baker, California, in the Mojave National Preserve and adjacent to areas of critical ecological concern.

The center contains the habitat of the Mohave Tui Chub, a federally registered, endangered species of fish. Dormitory, bath house, kitchens, lecture rooms, laboratory, computer lab, and library facilities are available to support classes and individuals conducting independent study projects and research.

The center offers a variety of short-term courses on desert-related topics and hosts field-oriented courses in anthropology, archaeology, art, biology, geography, geology, history and physics. The School of Natural Sciences Office can supply information to those seeking to use or visit the Desert Studies Center or phone (714) 773-2428; E-mail: WPresch@Fullerton.Edu.

Campus Tours

Tours of the Cal State campus are available throughout the year for individuals or groups. Student visitors interested in acquiring firsthand information about the university's programs or classes may request a meeting with faculty or administrators. Arrangements can be made to sit in on class lectures or visit the residence halls. Requests should be made through the Outreach Services Office at (909) 880-5188.



Academic Support Services

Division of Undergraduate Studies

*University Hall, Room 368
880-5032*

The university offers through the Division of Undergraduate Studies a wide range of academic support services designed to help students achieve their educational goals.

Testing

The Testing Office administers tests applicable to admission, academic placement, and academic achievement, including the American College Testing (ACT) program, Graduate Record Examinations (GRE), ELM, EPT, NTE/PRAXIS, GMAT and CBEST. Information and applications for other nationally administered tests used for college or graduate school entrance are also available. Testing is located in Jack Brown Hall, Room 105, 880-5041.

Learning Center

The Learning Center provides several free services for CSUSB students which include tutoring for many undergraduate courses, basic computer instruction, and study skills/personal growth workshops. A writing program offers one-on-one assistance with all levels and types of writing assignments. Testing is conducted for students in self-paced courses, and those needing make-up and challenge examinations. CAI (Computer Assisted Instruction) programs are available for several subjects, including GRE (Graduate Record Exam) preparation. The Learning Center is located in University Hall, Room 351, 880-5038.

Intensive Learning Experience Program

The Intensive Learning Experience (ILE) program provides instruction and advising for students enrolled in Basic English (English 85) and/or Basic Mathematics (Mathematics 75). Each is a course sequence designed for students who need to improve their skills in these areas prior to enrolling in Freshman Composition and one of the General Education mathematics courses. Participation in the ILE program is determined by scores on the English Placement Test and the Entry Level Mathematics test.

While ILE courses do not count toward the units one needs to graduate, they do carry course-load credit. One of the great attractions of these classes is the small class size. The ILE Director's Office is located in University Hall, Room 368, 880-5032.

Educational Opportunity Program

The Educational Opportunity Program (EOP) is an admissions and support services program designed to assist students who meet specific income guidelines and demonstrate the potential to obtain a baccalaureate degree offered by the university. The services are available for a maximum of five years.

Through the Educational Opportunity Program, the student receives help in admissions, registration, financial aid, housing, curriculum planning, tutoring, personal, academic and career counseling, graduate school information, workshops, and other support services, depending upon individual needs. EOP is located in University Hall, Room 395, 880-5042.

Student Support Services Program - Student Assistance in Learning (SAIL) Program

The S.A.I.L. program (Student Assistance in Learning) is the university's Student Support Services project. Funded by a grant from the United States Department of Education, S.A.I.L. is designed to assist students who are low-income, who are disabled, or whose parents have not earned a bachelor's degree, to persist toward graduation. The program offers a variety of supportive services that assist participants to maximize their effectiveness as students. These services include:

- Adjunct courses—Two-unit courses designed to help students earn better grades in general education courses.
- Academic and financial aid advising
- Personal and career counseling
- Reading Assistance Program (RAP)—a computer assisted instructional program to increase reading speed, vocabulary and comprehension
- Graduate school information and assistance

For more information and to determine eligibility for program services, visit the SAIL office is located in University Hall, Room 386 (within the Learning Center), 880-5921.

Advising and Academic Services

Advising and Academic Services provides academic advising for all undeclared students, academic retention counseling for all first-time probation students, information sessions for all new freshman and transfer students, ELM (Entry Level Mathematics)/EPT (English Placement Test), basic skills/upper-division writing compliance enforcement for the university, testing coordination, and supervision for the university waiver of regulation petitions.

The office reviews and acts on the following petition requests: admission by special action, general education course substitutions, retroactive withdrawals, extension of time to remove "Incomplete" grades beyond one year, leave of absence, academic renewal, simultaneous enrollment, drop after census date for undeclared students, and other waivers of university regulations.

In addition, the office provides general education and credit summary assistance for students, academic counseling for continuing probation and dismissed students, educational equity support advising for special admits (TAP program), first-year athletes (ACE program), and supervision for the University Studies 37 study skills course. **Electronic Mail (e-mail) Advising** is available for students, faculty, staff and the community for academically related inquiries.

Advising and Academic Services is located in University Hall, Room 380, 880-5034. The E-mail address is: "ASKCSUSB@wiley.csusb.edu"

Writing Center

The Writing Center, a joint project of Undergraduate Studies and the School of Humanities, works to support both writing itself and writing as a mode of learning. Tutors offer individual consultation to students writing in all disciplines; they focus on generating, developing, and organizing ideas as well as on editing. In addition, they conduct conversation groups for ESL students and writing workshops in a variety of university classrooms. Faculty writing consultants help other faculty members to design, implement, and evaluate writing projects for courses in all disciplines as well as to revise their own writing for publication.

The Writing Center is located in University Hall, Room 387 (within the Learning Center, UH 351), 880-5833.

Student Life

Housing

Serrano Village, the university's on-campus housing facility, is a focal point of campus life for more than 400 residential students. Social as well as educational activities are organized by the Village residents with the assistance of the housing staff, making the Village a center for living and learning with other students.

The Village is composed of eight attractive redwood houses. Each house has a main lounge, recreation room, kitchenette, laundry-workroom, sun deck and patio. Both single and double rooms are available. Rooms are arranged in suites so that no more than 10 students share a study room and bathroom facilities.

The Village has both indoor and outdoor recreational facilities. The indoor area contains pool tables, a ping-pong table, mail boxes and a large activity room for meetings, dances and programs. The outdoor recreational area contains a barbecue, patio, volleyball court, paddle tennis court, sun deck and a swimming pool. Alcoholic beverages are not permitted in residence hall facilities. Smoking is not permitted inside buildings, including students' rooms.

Living on campus is reasonably priced when compared to the rapidly rising costs of commuting and has the added advantage of being near the University's Pfau Library and other facilities. The rates for living in the Village include meals served at the nearby University Commons. The cost of a double room and meals is expected to be approximately \$4,380 per year in 1995-96. Several convenient payment options are available. Serrano Village does not provide family housing or on-campus apartments for married students.

Any student needing information about on-campus housing should contact the Housing Office, 880-5246.

Associated Students, Inc. (ASI)

All students are members of the Associated Students, Inc., which is governed by an elected Board of Directors. A.S.I. sponsors a book co-op, check-cashing service, emergency loan program, legal aid and other student-initiated services. A.S.I. also assists the Children's Center, campus newspaper and many university-wide programs.

"Escape" is an A.S.I.-sponsored outdoor leisure program. Students have the opportunity to discover and learn about California's outdoors while participating in recreational activities. An informal atmosphere is created which enables students to make new acquaintances, to exchange ideas and to become more socially aware. Past "Escape" activities have included backpacking, skiing, sailing, canoeing, and trips to amusement parks, sports events and theatrical productions.

Activities

The diverse interests and lifestyles of students are reflected in numerous activities sponsored by the university and the Associated Students, Inc. These programs include dances, drama productions, choral concerts, quarterly festivals, musical concerts, guest lecturers and small group socials.

The university and the Associated Students, Inc. encour-

age and aid formation of organizations which enhance the educational opportunities of students. These organizations involve students, faculty and staff working together in professional, recreational, educational, service, religious and cultural activities. University-recognized groups have full use of campus facilities in planning their programs.

Student Union

The Student Union is the recreational and gathering center of the campus. The mission of the Student Union is to provide and promote a comfortable, safe, well-kept, attractive setting for students in which they may relax and engage in enjoyable and educational activities. The Student Union includes spacious lounge areas, a quiet lounge/reading room, the Coyote Cafe, the Pub, a game room, a copy center and a spacious courtyard. Offices for the Associated Students, Inc., the Office of Student Life, meeting rooms for organizations and a 1,000-seat Events Center used for major events are a part of the facility. Services provided in the Student Union include an Automatic Teller Machine, locker rentals, free notary services to students, college ring sales and Student Union scheduling. The Student Union Program Board provides daytime and evening entertainment on a weekly basis.

Women's Resource and Adult Re-Entry Center- provides the campus community with resource publications, information and programs on the educational, career, personal needs and interests of women. Assists students who have re-entered the university after several years of life and work experience. Provides support groups, information and peer support.

Multicultural Center- provides a place for students to go who feel they are ethnically underrepresented on campus. All students are welcome and encouraged to express and share their cultural differences, concerns and goals. The Center builds camaraderie and understanding among different cultures by focusing on the similarities and appreciating the differences. It stresses the concept that learning on campus is not confined to the classroom.

Intercollegiate Athletics

An intercollegiate athletics program was implemented in the 1984-85 academic year. It is an NCAA, Division II program with basketball, swimming and soccer for both women and men; volleyball and softball for women; and golf and baseball for men.

Other sports planned in the coming years are track and field for men and women.

The university mascot is the Coyote and the colors are light blue and brown.

New Student Programs

The purpose of new student orientation is to assist students in their transition to the university, introduce them to the broad educational opportunities at CSUSB and to integrate them into the life of the university. New student orientation programs are offered immediately prior to the beginning of each quarter. Fall orientations include a

comprehensive overnight program for first-time freshmen, a transfer orientation and a program designed specifically for re-entry students. Winter and spring orientations are combined and are held in the evenings during quarter break. Each new student orientation program is designed to minimize anxiety and to promote positive attitudes about the student's success at the university. All new student orientation programs are staffed by student volunteers who have participated in a comprehensive training program. This leadership training is one of the ways new student orientation benefits continuing students. Many student orientation leaders ascend into positions of top-level leadership on campus due to their training and experience through new student orientation programs.

The Emerging Leader Program is designed to introduce new students to issues in leadership and to leadership opportunities on campus. New students are admitted to this program during fall quarter.

Student Clubs and Organizations

More than 90 student clubs and organizations are currently chartered at CSUSB. Departmentally affiliated (those directly related to an academic program), religious, cultural, service and political organizations are just a few of the clubs open to students. In addition, nine national sororities and fraternities are active on campus. The staff in the Student Life Office provides advice, support and extensive leadership development opportunities to students involved in organizations.

Intramural Sports

This program provides an opportunity for students, faculty and staff to participate in organized recreational sports activities.

Each quarter a comprehensive schedule includes at least six different intramural events, ranging from team sports to one-day individual activities.

Informal Recreation

The gymnasium, weight room, racquetball courts, tennis courts and swimming pool are available for unstructured use. Individual students who wish to utilize these facilities are encouraged to do so.

A large inventory of recreational equipment also is available for checkout to anyone possessing a valid California State University, San Bernardino identification card.

Career Development Center

The Career Development Center offers assistance to students planning for future employment. The office provides a variety of programs and services designed to aid students and alumni seeking employment in business, industry, and government as well as the teaching profession. Workshops on resume writing, interviewing skills, job search strategies and other related areas are provided by staff, faculty and business representatives. An On-Campus Interview Program provides individual interview appoint-

ments for students and alumni with a wide range of employers. Three separate annual career fairs are available—Career Opportunities Fair (designed for those seeking positions in business, industry and government), Part-Time/Seasonal Job Expo (designed to assist students with part-time/seasonal jobs) and Careers In Education Job Fair (designed for those seeking employment in the education field). The Career Center also administers the Student Employment Program involving both on and off-campus part-time jobs. Graduate school files may also be established in the Career Center. A nominal fee is charged to alumni three months after student status has been completed.

Financial Aid

The Financial Aid Office administers a variety of programs to assist qualified students. Sources of aid include the Federal Pell and Supplemental Educational Opportunity Grants, Perkins Loans and Work-Study Program. The Federal Stafford Student Loans and Parent Loans to Undergraduate Students are also available. Short-term loans are available for financial crises which require funds rapidly. The office also administers State University Grants, Educational Opportunity Programs Grants and the State Work-Study Program.

For a student interested in working part-time, on or off campus, assistance in obtaining a job is available through the Career Development Center.

The Free Application for Federal Student Aid must be submitted to the processor by March 2. Late applications are accepted after March 2 and throughout the school year if funds are available. Necessary forms can be obtained from high schools, community colleges or the university.

A full description of the university's financial aid programs is available in the free financial aid brochure.

Scholarships

The scholarships listed below are awarded to new and continuing students in accordance with the terms of the gifts. Scholarship applications are accepted until March 2. Contact the Financial Aid Office for details. Generally, students must possess a minimum grade-point average of 3.0 ("B"). Ordinarily, students applying for scholarships are considered for any for which they may be eligible.

The Albro Scholarship is a \$1000 scholarship awarded annually to a full-time African American student with a minimum 3.0 GPA.

The Associated Students, Incorporated provides 10 scholarships at \$700 each annually to continuing students demonstrating academic ability and financial need.

The California Retired Teachers Association provides a \$1500 scholarship to a senior or graduate student entering the field of teaching. The student is selected on the basis of financial need, academic achievement and school and community activities.

The California State University African American Scholarship Fund awards ten \$1000 scholarships to African American students who graduate as a resident from a California high school, enter as a new CSU freshman, and meet the regular CSU admissions criteria.

The California State University Hispanic Scholarship Fund provides twenty \$1000 scholarships to students of Hispanic heritage, with preference given to entering freshmen and transfer students from a community college. This scholarship is funded in part by the National Hispanic Scholarship Fund, with matching funds from the California Lottery.

The California State University, San Bernardino Associates provides two scholarships totaling \$800 to upper-division students who possess a superior academic record,

Financial Aid Chart

<u>Types of aid</u>	<u>Who can help</u>	<u>Determination of eligibility</u>	<u>Repayment requirement</u>
A. Scholarships			
Local scholarships	High school or college counselor	GPA, need	no
University scholarships	University financial aid officer	GPA or GPA and need	no
B. Grants			
Pell Grant	High school or college counselor	need	no
Supplemental Educational Opportunity Grant	University financial aid officer	need	no
Cal Grant A/B, Bilingual Teacher Grants and Fellowships	High school or college counselor	GPA, need	no
Educational Opportunity Program Grant	University E.O.P. director or aid officer	need	no
State University Grant		need	no
C. Loans			
Perkins Loan	University financial aid officer	need	yes
Subsidized Stafford Loan	University financial aid officer	need	yes
Unsubsidized Stafford Loan	University financial aid officer	enrollment	yes
D. Work-study			
Federal work-study program	University financial aid officer	need	no
State work-study program	University financial aid officer	need	no
E. On and off-campus part-time jobs	University placement advisors	—	—

Other aid-related programs are available through the Veterans Administration, California State Rehabilitation, ROTC, Social Security, Bureau of Indian Affairs and other public assistance agencies.

financial need and a record of good citizenship.

The Lawrence Daniels Scholarship provides approximately \$250 annually to an outstanding upper-division black student who has demonstrated leadership qualities in school and in the community.

California Portland Cement awards \$1000 annually to a full-time student in a teaching credential program preparing them to teach math or science at the secondary level.

The Anthony and Lois Evans scholarship is awarded to a student with a minimum GPA of 3.5 who is involved in student performance activities such as music, theatre art or debate/forensics. The annual award is approximately \$250.

The Faculty and Staff Memorial Scholarship honors the memory of deceased university faculty and staff. Amounts vary as additional funds are added to the scholarship; the most recent award was \$600. The Faculty and Staff Memorial Scholarship Fund, managed by the foundation, contains tributes to former faculty including Dr. Mary Cisar (died 1971), Dr. Walter Zoecklein (1975), Dr. Florence Mote (1977), Dr. Neville Spencer (1977), Dr. James Finley (1980), Dr. William Gean (1980), Dr. Alfred Egge (1982), Dr. Marvin Frost (1983), Dr. Robert R. Roberts (1984) and Dr. Margaret Lenz (1987).

The Farmers Insurance Group of Companies awards from \$500 to \$2,000 annually to an outstanding student interested in the fields of insurance, mathematics, business administration, personnel, or other areas related to the insurance industry.

The Foundation for California State University, San Bernardino provides approximately \$2000 in scholarships to continuing students with superior academic records and financial need.

The Donald W. Jordan Memorial Scholarship provides a \$500 annual scholarship for an undergraduate student interested in the practice of law.

The David Montano Memorial Scholarship of approximately \$400 is awarded annually to a junior or senior student who plans to continue his or her postsecondary education at California State University, San Bernardino.

The Eva Mae Merchant Loan-Scholarship is awarded annually to students in the Education or Nursing Departments. Each award is comprised of a \$750 scholarship and a \$750 no-interest loan.

The Alfred F. and Chella D. Moore Scholarship Fund provides approximately \$14,400 in scholarships to incoming freshmen with outstanding academic records (3.5 grade-point average minimum). The amount of each award is \$1200; some awards may automatically be renewed for an additional three years for a total of \$4800. No special application is required for renewal.

The Alan Pattee Scholarship is provided to the children of California law enforcement personnel or firemen who are killed in the performance of official duties within the State of California. The amount of the scholarship is equal to the cost of tuition and mandatory registration fees.

The Riverside Foundation/Leon S. Heseman Scholarship Fund provides approximately \$7000 for scholarships to undergraduate students with superior academic records, financial need and records of good citizenship. Preference is given to residents of Riverside and San Bernardino

counties. Typically, scholarships average \$500.

The San Bernardino County Central Credit Union provides a \$1000 annual award to an undergraduate or graduate student who is enrolled full time in the School of Business and Public Administration or the School of Social and Behavioral Sciences.

The Nancy E. Smith Scholarship is provided to a full time student majoring in public administration or political science who intends to pursue a career in public service. The amount of the award is \$300.

The William H. Wilson Scholarship is an annual scholarship provided to a full-time student at California State University, San Bernardino, preferably from the immediate San Bernardino area. Applicants must demonstrate economic need. The scholarship will average \$300. Ordinarily, the scholarship will be given to a different student each year, but under special, extenuating circumstances, it may be renewed.

Some scholarships are administered by the major departments and associations. Applications and further information about them may be obtained by contacting the department or association. These include but are not limited to:

The Robert C. Byrd Honors Scholarship is a federally funded scholarship of \$1500 awarded to incoming freshman students.

The Jack H. Brown Scholarship is a \$1000 award to students majoring in Business/Public Administration.

The Cajon High School-CSUSB Scholarship is awarded by Cajon High School to graduating students who will be attending CSUSB. Cajon High School awards \$250 which is matched by CSUSB totalling \$500 in scholarship.

The California State University Alumni Association, Business Chapter awards a \$250 scholarship to students majoring in business or public administration.

The California State University Association of Latino Faculty, Staff and Students awards eight \$500 scholarships to students of Latino heritage.

The California State University, San Bernardino Alumni Association provides three \$500 scholarships to students exhibiting financial need, academic superiority and community involvement.

The California State University, San Bernardino Black Faculty and Staff Association awards approximately \$1000 in scholarships to outstanding black students. Preference will be to those who demonstrate economic need.

The California State University, San Bernardino Department of Public Administration selects an annual recipient of the Carol J. Bellis Scholarship. This \$200 award is presented to a Public Administration major who has completed an outstanding research paper as part of the requirements for any class in public administration. The same department also administers the Margaret King Gibbs Scholarship of \$100 to a graduate student enrolled in the Master of Public Administration degree program, based on an outstanding academic record and outstanding research project and/or papers completed as part of the requirements for the degree.

The California State University, San Bernardino Economics Department awards the Janczyk Family Scholarship, the John Winn Kennedy, Sr. Scholarship, and the

Economics Alumni Scholarship to economics majors or administration majors concentrating in business economics. Each award is approximately \$500.

The California State University, San Bernardino Music Department provides 10 merit scholarships totaling \$2500 to students who have demonstrated above average proficiency with a musical instrument and have performed with a related university organization.

The California State University, San Bernardino School of Natural Sciences awards the Leon V. and Marion G. Pittman Scholarship annually to a full-time sophomore student majoring in biology, chemistry, mathematics, or physics. The emphasis in selection is on the student's academic record in the freshman year of studies at CSUSB. The most recent award was for \$400.

The California State University, San Bernardino Theatre Arts Department provides 10 scholarships totaling \$1400 to students who have demonstrated excellence in the field of theatre arts.

The Paul Douglas Teacher Education Scholarship provides a maximum of \$5,000 per year for up to four years for students who are legal residents of California; graduated in the top 10 percent of their high school class; are pursuing an academic course of teacher preparation to be certified as a teacher; and who agree to pursue a single subject credential in a designated teacher shortage area, or multiple subject credential with a bilingual emphasis, or to teach in a low income area for two years for each year for which the scholarship is received. The number of awards provided varies each year.

The Gay and Lesbian Union awards \$100 annually to students involved in the gay community.

The Reynold C. Gross Memorial Scholarship is awarded annually to an ROTC cadet in good standing.

The Grossman/Career Ladder Scholarship awards \$800 to a San Bernardino Unified School District employee enrolled in at least five units per quarter.

The Graduate Equity Fellowship is funded by the CSU Chancellor's Office, and administered by the Office of Graduate Studies. Sixteen underrepresented minority graduate students were awarded \$1740 each last year.

The Arlene Roberts Memorial Scholarship of \$250 is awarded to full-time art majors with a minimum 3.0 GPA and who exhibit financial need.

The Linda Stockham Scholarship of \$250 is awarded to graduate students with a B.A. in Anthropology and a 3.0 GPA in major course work and 2.75 overall.

The Western Association of Food Chains awards five \$1000 scholarships to business administration students with an emphasis in the food industry. Students must have a minimum 3.0 GPA overall.

Many students qualify for assistance through other programs not administered by the University. They include veterans' benefits, dependents of disabled or deceased veterans, Social Security Administration, State Department of Rehabilitation, Bureau of Indian Affairs and other public assistance agencies.

Cal Grant A/B, Bilingual Teacher Grants and Graduate Fellowships. Students apply directly to the California Student Aid Commission for these state-sponsored awards

which cover a portion of the expense of required fees. Applications and full information on these awards are available at high schools, community colleges and the California State University, San Bernardino Financial Aid Office.

International Students

The International Student Services Office is the primary contact for international students including new immigrant and permanent resident students who are nationals of other countries. The ISS Office assists students upon arrival with locating temporary and permanent housing, provides an orientation to the community and the campus including information about academic requirements, immigration requirements, housing, health and support services available to the student. The ISS Office also provides programs and activities to assist students with personal growth and development. Assistance and referrals are available for academic and personal counseling.

The ISS Office works closely with the international clubs and the various nationality organizations in bringing cultural events on campus. Information about club activities and field trips is available. The International Student Services Office is in University Hall, Room 183.

Student Affirmative Action

The Student Affirmative Action (SAA) Program is designed to provide encouragement, assistance and information to junior high/middle school students regarding opportunities in higher education. The primary objective of this early outreach effort (Project UPBEAT) is to increase the number of students from underrepresented ethnic groups who pursue a college education. Students participating in Project UPBEAT are likely to be regularly admissible to four-year colleges upon graduation from high school. Campus tours, lectures by professors and workshops for parents are major activities of the program.

Upward Bound Program

The Upward Bound Program attempts to generate skills and motivation necessary for success in education beyond high school. Participants are low-income and potential first generation college students.

Students must have completed the 8th grade and have not been promoted to the 12th grade; be between the ages of 13 and 18; enrolled in high school; planning to go to college, and need the services in order to fulfill their goals.

Upward Bound provides tutoring, academic advisement and career exploration. Services are provided year-round which include Saturday university sessions, weekly tutorial sessions, and cultural events. The summer component is an extensive six-week residential program.

Participants are selected based upon recommendations from their counselors, teachers, and social services agencies.

Student Health Center

The Student Health Center assists students in maintaining good health to successfully participate in the educational program of the campus. The Student Health Center provides,

on an outpatient basis, medical care usually provided by a primary physician. Services available during posted hours include treatment of illnesses, injuries, family planning and immunization programs. Referrals to community health facilities are made for major illnesses or injuries beyond the scope of the Student Health Center. Any outside care, whether referred by the Health Center or not, is at the student's expense. Medication and elective health services (such as pre-employment physical examinations) are available at a modest cost. The Center has its own licensed pharmacy where students may get prescriptions filled and purchase over-the-counter items as well. Charges associated with these services are usually dramatically lower than those found elsewhere.

All regularly enrolled students with validated identification cards are eligible for services. Students in the extension program and those on employee fee waiver are not eligible.

A supplementary insurance plan is available to all regularly enrolled students through a private insurance company. This plan provides health insurance coverage for serious illnesses and accidents that may require hospitalization. For more information or to purchase this insurance, contact Associated Students, Inc., 880-5932.

The Health Center is open September 1 through June 30. Office hours are Monday and Thursday, 8 a.m. - 5 p.m., Tuesday and Wednesday, 8 a.m. - 6 p.m., Friday, 9 a.m. - 4:30 p.m. Quarter break hours: Monday - Thursday, 8 a.m. - 4:30 p.m. and Friday, 9 a.m. - 4:30 p.m. The Center is closed on official university holidays. In case of on-campus emergency, contact the Department of Public Safety at 880-5911.

Immunizations - The Student Health Center provides clearances for the requirement that certain groups of students present proof of measles and rubella immunizations by the beginning of their second quarter of enrollment at CSUSB. Students may fulfill the requirement by bringing or sending documentation showing proof of immunity to both rubeola and rubella to the center. For those students unable to obtain acceptable proof of immunizations, the Student Health Center will provide immunizations during posted clinic hours at no cost. For more information call 880-5421. Please refer to Page 38 for detailed information on the measles requirement.

Because of recent changes in the character of measles epidemics on college campuses nationwide, all students are encouraged to consider receiving a second immunization for measles prior to enrollment.

Student Health Advisory Committee - Students can offer important feedback about services through membership on the Student Health Advisory Committee (SHAC) sponsored by Associated Students, Inc. Members not only work with clinic staff on a variety of health education projects, but also act as a liaison between the CSUSB student body and Student Health Center. SHAC keeps the Health Center staff focused and current on major student health issues.

Services to Students with Disabilities (SSD)

This office provides academic support services to students with temporary or permanent disabilities. The services available include: tape-recording of course related materials, sign language interpreting, supplemental specialized tutoring, test-taking accommodations, assistance with registration, campus orientation, paper typing for eligible students, assistance with library research and laboratory assignments, and mobility assistance. Diagnostic assessment to identify learning disabilities is provided by specially trained staff members. Students may receive disability adjustment and transition counseling from a licensed staff member. The SSD Office has a computer lab equipped with adaptive hardware and software selected to accommodate individuals with a variety of disabilities.

The SSD Office in conjunction with the California State Department of Rehabilitation has acquired a federal grant, the goal of which is post-graduation job placement. This project, Workability IV, focuses on effective adaptive technology appropriate to each participant's disability and chosen field of employment.

Both prospective and new students to the university are encouraged to contact SSD early in their CSUSB programs. To arrange an appointment with a SSD staff member, call (909) 880-5238 or 880-5242 Voice/TDD. The office is located in University Hall, Room 235.

Department of Public Safety

The Department of Public Safety (campus police) is a duly authorized law enforcement agency whose primary mission is the protection of life and property through professional service to the university community.

All public safety officers are trained through the regional training academy and adhere to all the rules and regulations set forth by the State Department of Justice, Peace Officers Standards and Training (POST). Officers receive in-service as well as advanced training to maintain their certification as California peace officers.

The department provides a full range of public safety services such as: all campus crime reports, enforcement of state laws, investigations, medical emergencies, fire emergencies, crime prevention, motorist assistance, lost and found, and other incidents requiring police assistance.

Public safety services are provided 24 hours a day, seven days a week, by dialing extension 5911 for emergencies and 880-5165 for all other requests.

Student Services

The Office of the Vice President for Student Services provides general information concerning campus policies, procedures and regulations and offers help to students seeking to resolve a campus problem. Students needing assistance with any university matter are invited to begin with this office. Specific policies regarding student grievances, discipline and emergency calls for students are administered by this office. A more complete statement on student privacy rights appears in the Appendix.

Children's Center

The Children's Center is a child development program which accommodates children of university students, as well as faculty and staff and people from the community when space is available. The center is open during the academic year (during periods that daytime classes are in session and during some evening hours) for children two-and-a-half years (toilet trained) to 12 years. Additional information regarding fees and space availability may be obtained by calling the Children's Center Office, at 880-5928.

Alumni Association

All graduates of the university are eligible to join and participate in the activities of the California State University, San Bernardino Alumni Association. Also eligible are those who earn credentials through the university and members of the senior class.

The purpose of the nonprofit association is to assist alumni in continued cultural and educational development, further the community interests of the university, establish mutually beneficial relationships between the university and its alumni, and promote the educational goals of the university. Additional information may be obtained from the Alumni Affairs Office, or call 880-5008.

Commons

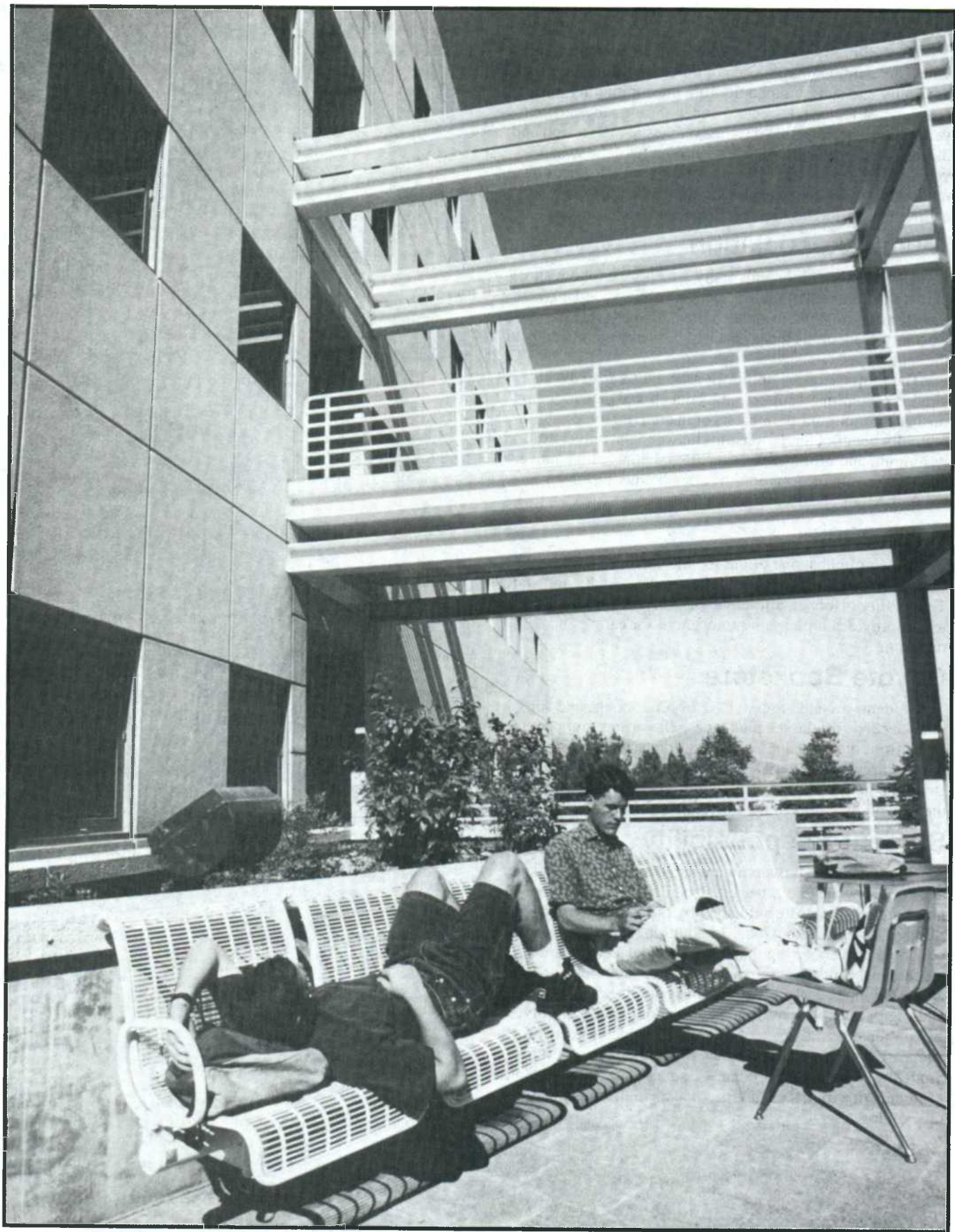
The Commons, one of the social centers of the campus, serves residential and commuter students, faculty and staff. The facility offers an attractive view of the mountains which provides a pleasant atmosphere for eating and relaxing.

Coyote Bookstore

Students are able to purchase or order books and supplies needed for classes plus tapes, class rings and personal items from the on-campus Coyote Bookstore, owned and operated by the University Foundation. The Coyote Bookstore is a nonprofit operation, with proceeds used to further the educational aims of the university.

Student Responsibility

Students at the university are subject to all federal, state and local laws as are other citizens. Of particular importance are regulations established by the State of California through its Education Code. In addition, Board of Trustees and local university regulations directly affect student life on campus. Students are responsible for their behavior on and off campus and are expected to comply with all policies and regulations which are posted and/or printed in university publications. Copies of all policies which affect students are available at the Office of the Vice President for Student Services. The Student Conduct Code, which relates to student disciplinary matters, appears in the appendix of this catalog.



Admission to the University

Requirements for admission to California State University, San Bernardino are in accordance with Title 5, Chapter 1, Subchapter 3, of the California Code of Regulations. Prospective applicants who are unsure of their status under these requirements are encouraged to consult a high school or community college counselor or the Admissions and Records Office. Applications may be obtained from the admissions office at any of the campuses of The California State University or at any California high school or community college.

The CSU advises prospective students that they must supply complete and accurate information on the application for admission, residence questionnaire and financial aid forms. Further, applicants must have authentic and official transcripts of all previous academic work attempted submitted directly from each institution attended. Failure to file complete, accurate and authentic application documents may result in denial of admission, cancellation of academic credit, suspension or expulsion (Section 41301 of Title 5, California Code of Regulations).

Students who are admitted to the university for a given term but who do not register in that term must file a new application form and \$55 application fee when they again seek admission and must meet the then current admission requirements.

Undergraduate Application Procedures

Prospective students, applying for part-time or full-time undergraduate programs of study, in day or evening classes, must file a complete undergraduate application as described in the undergraduate admissions booklet. The \$55 nonrefundable application fee should be in the form of a check or money order payable to The California State University and may not be transferred or used to apply to another term.

An alternate campus and major may be indicated on the application, but applicants should list as an alternate campus only a campus that also offers the major. Generally, an alternate major will be considered at the first choice campus before an application is redirected to an alternate choice campus.

Impacted Programs

The CSU designates programs to be impacted when more applications are received in the first month of the filing period than the spaces available. Some programs are impacted at every campus where they are offered; others are impacted at some campuses but not all. Students must meet supplementary admissions criteria when applying to an impacted program.

The CSU will announce before the opening of the fall filing period which programs are impacted and the supplementary criteria campuses will use. That announcement will be published in the "CSU Review," distributed to high school and college counselors. Information about the supplementary criteria is also sent to program applicants.

Students must file their applications for admission to an impacted program during the first month of the filing period. Further, if they wish to be considered in impacted programs at two or more campuses, they must file an application to each.

Each campus with impacted programs uses supplementary admission criteria in screening applicants. Supplementary criteria may include ranking on the freshman eligibility index, the overall transfer grade-point average and a combination of campus-developed criteria. Students required to submit scores on either the SAT or the ACT should take the test no later than December if applying for fall admission. The supplementary admission criteria used by the individual campuses to screen applicants appear periodically in the "CSU Review" and are sent by the campuses to all applicants seeking admission to an impacted program.

Unlike unaccommodated applicants to locally impacted programs, who may be redirected to another campus in the same major, unaccommodated applicants to systemwide impacted programs may not be redirected in the same major but may choose an alternate major either at the first choice campus or another campus.

Application Filing Periods

Terms in 1995-96	Applications first accepted	Student notification begins
Fall quarter 1995	Nov. 1, 1994	Dec. 1994
Winter quarter 1996	June 1, 1995	July, 1995
Spring quarter 1996	Aug. 1, 1995	Sept. 1995

Each campus accepts applications until capacities are reached. Many campuses limit undergraduate admissions in any enrollment category because of overall enrollment limits. If applying after the initial filing period, consult the Office of Admissions and Records for current information.

Application Acknowledgment

Students may expect to receive an acknowledgment of their application from their first-choice campus within two to four weeks of filing the application. A notice that space has been reserved will also include a request that they submit the records necessary for the campus to evaluate their qualifications. Students may be assured of admission if the evaluation of their qualifications indicates they meet admission requirements. Such a notice is not transferable to another term or to another campus.

Hardship Petitions

The campus has established procedures for considering qualified applicants who would be faced with an extreme hardship if not admitted. Prospective hardship petitioners should contact the university regarding specific policies governing hardship admission.

Undergraduate Admission Requirements

First-Time Freshman Applicants

Students will qualify for regular admission as a first-time freshman if they

1. are high school graduates (see High School Graduation Equivalency below),
2. have a qualifiable eligibility index (see below), and

3. have completed with grades of "C" (2.0) or better each of the courses in the comprehensive pattern of college preparatory subject requirements (see "Subject Requirements" below). Courses must be completed prior to the first enrollment in the California State University.

Eligibility Index—The eligibility index is the combination of the high school grade-point average and the score on either the American College Test (ACT) or the Scholastic Aptitude Test (SAT I taken before March 1995). See Page 62 for revised score requirements. For this purpose, the university computes the grade-point average on the final three years of high school studies, excluding physical education and military science, and uses bonus points for approved honors courses. Grades of "C" (2.0) or better in up to eight semester courses, taken in the last two years of high school, that are designated honors in approved subjects receive additional points in grade-point-average calculations. Each unit of A in approved courses will receive a total of 5 points; B, 4 points; C, 3 points; D, 1 point; and none for F grades.

CSU may offer students early, provisional admission based on work completed through the junior year of high school and planned for the senior year.

Students can calculate the index by multiplying their grade-point average by 800 and adding their total score on the SAT I. Or, if they took the ACT, multiply the grade-point average by 200 and add ten times the composite score from the ACT. California high school graduates (or legal residents of California for tuition purposes) need a minimum index of 2800 using the SAT I or 694 using the ACT. The table on Page 450 shows the combinations of test scores and averages required. Students who neither graduated from a California high school nor are a resident of California for tuition purposes need a minimum index of 3402 (SAT I) or 842 (ACT).

Applicants with grade-point averages of 3.0 or above (3.61 for nonresidents) are exempt from the test requirement. However, students are urged to take the SAT I or ACT since all campuses use test results for advising and placement purposes.

Students will qualify for regular admission when the university verifies the student has a qualifiable eligibility index and has completed the comprehensive pattern of college preparatory subjects and, if applying to an impacted program, meets supplementary criteria.

High School Graduation Equivalency—

Students Who Are Not High School Graduates—may satisfy the high school graduation requirement by submitting the California Certificate of Proficiency or the General Education Development (GED) certificate or equivalent certificates awarded by other states.

1. *California High School Proficiency Test*—A "pass" on the California High School Proficiency Examination is considered equivalent to graduation from high school.
2. *Tests of General Educational Development (GED)*—An applicant submitting scores on the GED has established high school graduation equivalence if the average score for the five tests is 45 or better and each score is at least 40.

Meeting Admission Requirements—Applicants presenting the high school proficiency test or the GED will be

expected to meet the fifteen-unit college preparatory subject requirements. Grades in courses completed after grade nine are used to calculate the grade point average for the eligibility index.

Subject Requirements

The California State University requires that first-time freshman applicants complete, with grades of "C" (2.0) or better, a comprehensive pattern of college preparatory study totaling 15 units. A "unit" is one year of study in high school.

English, 4 years.

Mathematics, 3 years: algebra, geometry, and intermediate algebra.

U.S. History or U.S. History and Government, 1 year.

Science, 1 year with laboratory: biology, chemistry, physics, or other acceptable laboratory science.

Foreign language, 2 years in the same language (subject to waiver for applicants demonstrating equivalent competence).

Visual and performing arts, 1 year: art, dance, drama/theater, or music.

Electives, 3 years: courses selected from English, advanced mathematics, social science, history, laboratory science, foreign language, visual and performing arts and agriculture.

Subject Requirement Substitution for Students with Disabilities

Applicants with disabilities are encouraged to complete college preparatory course requirements if at all possible. If an applicant is judged unable to fulfill a specific course requirement because of his or her disability, alternate college preparatory courses may be substituted for specific subject requirements. Substitutions may be authorized on an individual basis after review and recommendation by the applicant's academic advisor or guidance counselor in consultation with the director of a CSU Disabled Student Services Program. Students should be aware that failure to complete courses required for admission may limit later enrollment in certain majors, particularly those involving mathematics. For further information and substitution forms, please call the director of Services to Students with Disabilities at CSUSB or at the nearest CSU campus.

Waiver of Foreign Language Subject Requirement

The foreign language subject requirement may be waived for applicants who demonstrate competence in a language other than English equivalent to or higher than expected of students who complete two years of foreign language study. Consult with a school counselor or any CSU campus admissions or Outreach Services Office for further information.

High School Students

Students still enrolled in high school will be considered for enrollment in certain special programs if recommended by the principal and if preparation is equivalent to that required of eligible California high school graduates. Such admission is only for a given program and does not constitute the right to continued enrollment. The university's High School-University Program enables qualified high school juniors and seniors to enroll in university classes at times convenient to their high school schedules. A brochure describing the program is available from the Office of Admissions and Records or the Outreach Services Office.

Provisional Admission

California State University, San Bernardino may provisionally admit first-time freshman applicants based on their academic preparation through the junior year of high school and planned for the senior year. The campus will monitor the senior year of study to ensure that those so admitted complete their senior year of studies satisfactorily, including the required college preparatory subjects, and graduate from high school.

Graduates of secondary schools in foreign countries must be judged to have academic preparation and abilities equivalent to applicants eligible under this section.

Transfer Applicants

Applicants will qualify for admission as transfer students if they have a grade-point average of 2.0 ("C") or better in all transferable units attempted (nonresidents must have a 2.4 grade-point average or better), are in good standing at the last college or university attended, and meet one of the following standards:

1. were eligible as a freshman (see Undergraduate Admission Requirements) at the time of application for admission or at the time of graduation from high school, provided they have been in continuous attendance at a college since graduation, or
2. were eligible as a freshman except for the college preparatory subject requirements and have completed appropriate college courses in the missing subjects and have been in continuous attendance in an accredited college since high school graduation, or
3. have completed at least 56 transferable semester (84 quarter) units and meet the requirements listed below based on high school graduation date. Nonresidents must have a 2.4 grade point average or better.

Applicants who graduated from high school 1988 or later:

- have completed all subject requirements in effect when graduating from high school (can use both high school and college coursework), or
- have completed at least 30 semester units of college coursework with a grade of "C" or better in each course to be selected from courses in English, arts and humanities, social science, science and mathematics at a level at least equivalent to courses that meet general education requirements. The 30 units must include all of the general education requirements in communication in

the English language and critical thinking (at least 9 semester units) and the requirements in mathematics/quantitative reasoning, or

- the Intersegmental General Education Transfer Curriculum (IGETC) requirements in English communication and mathematical concepts and quantitative reasoning.

Applicants who graduated from high school prior to 1988:

- have completed four years of high school English and two years of high school math, with grades of "C" or better, or
- have completed baccalaureate courses with grades of "C" or better that meet the general education requirements in communication in the English language and mathematics/quantitative reasoning, or
- IGETC requirements in English composition and mathematical concepts and quantitative reasoning. The course meeting either general education math requirement must be above the level of intermediate algebra.

Transferable courses are those designated for baccalaureate credit by the college or university offering the courses.

Students should consult a CSU admissions office for further information about alternative ways to satisfy subject requirements.

Test Requirements

Freshman and transfer applicants who have fewer than 56 semester or 84 quarter units of transferable college credit must submit scores, unless exempt (see "Eligibility Index" on Page 450) from either the Scholastic Aptitude Test of the College Board (SAT I) or the American College Testing Program (ACT). Test scores are also used for advising and placement services. Applicants may get registration forms and the dates for either test from school or college counselors, a campus Testing Office or may write to:

The College Board (SAT I)
Registration Unit, Box 592
Princeton, New Jersey 08541

or

American College Testing Program (ACT)
Registration Unit, P.O. Box 168
Iowa City, Iowa 52240

TOEFL Requirement

All undergraduate applicants, regardless of citizenship, whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who have not attended school for at least three years full time (105 quarter units) at the secondary level or above where English is the principal language of instruction must earn a minimum score of 500 on the Test of English as a Foreign Language (TOEFL). Individual campuses may require a higher score.

Health Screening

All new and readmitted students, born after January 1, 1957, will be notified of the CSU requirement to present proof of measles and rubella immunizations. This is not an

admissions requirement, but shall be required of students by the beginning of their second term of enrollment in CSU. California State University, San Bernardino requires that new and readmitted students present proof of immunizations in advance of or during the first quarter of attendance at CSUSB or registration for subsequent quarters will be prohibited.

Other persons subject to these screening provisions include:

- Students who reside in campus residence halls;
- Students who obtained their primary and secondary schooling outside the United States;
- Students enrolled in dietetics, medical technology, nursing, physical therapy, and any practicum, student teaching, or field work involving preschool-age children, school-age children, or taking place in a hospital or health care setting.

The Student Health Center shall provide immunizations without cost to those students unable to obtain acceptable proof of immunizations.

Adult Students

As an alternative to regular admission criteria, an applicant who is 25 years of age or older may be considered for admission as an adult student if he or she meets the following basic conditions:

1. Possesses a high school diploma (or has established equivalence through either the Tests of General Educational Development or the California High School Proficiency Examination).
2. Has not been enrolled in college as a full-time student for more than one term during the past five years.
3. If there has been any college attendance in the past five years, has earned a "C" (2.0) average or better.

Consideration will be based upon a judgment as to whether the applicant is as likely to succeed as a regularly admitted freshman or transfer student and will include an assessment of basic skills in the English language and mathematical computation.

To assess these skills, SAT or ACT scores must be presented prior to determination of admission. The ACT is offered on campus through the Testing Office.

International (Foreign) Students

The California State University must assess the academic preparation of foreign students. For this purpose, "foreign students" include those who hold U.S. visas as students, exchange visitors, or in other nonimmigrant classifications.

The CSU uses separate requirements and application filing dates in the admission of foreign students. For these purposes, foreign students are residents of a country other than the United States or those who hold visas as students, exchange visitors or in other nonimmigrant classifications.

Applicants for admission as either graduates or undergraduates whose education has been in a foreign country should file an application for admission, official certificates and detailed transcripts of record from each secondary school and collegiate institution attended several months in advance of the opening of the quarter in which the appli-

cant expects to attend. If certificates and transcripts are not in English, they must be accompanied by certified English translations. Credentials will be evaluated in accordance with the general regulations governing admission to California State University, San Bernardino. Priority in admission is given to residents of California.

An applicant whose education has been in a language other than English must take the Test of English as a Foreign Language (TOEFL). This test is administered in most foreign countries and test scores must be received by the university before admission to the university can be granted. Information as to the time and place at which this test is given may be obtained from: Educational Testing Service (TOEFL), Princeton, New Jersey 08540, U.S.A.

Foreign applicants must also submit a statement of financial responsibility to the Office of Admissions and Records to be considered for admission to the university. Also, foreign students are required to submit evidence of adequate medical/hospital insurance to the international student advisor.

Arrangements for housing should be completed before the student's arrival on the campus. Detailed information regarding housing may be obtained from the director of housing, California State University, San Bernardino. Scholarship aid for entering students is limited; no scholarships are specifically reserved for students from another country.

Upon arrival at California State University, San Bernardino the student should obtain an appointment as early as possible with the International Student Services Office.

Insurance Requirement—Effective August 1, 1995, as a condition of receiving an I-20 or IAP-66 form, all F-1 and J-1 visa applicants must agree to obtain and maintain health insurance as a condition of registration and continued enrollment in the California State University. Such insurance must be in amounts as specified by the United States Information Agency (USIA) and NAFSA: Association of International Educators. The campus president or designee shall determine which insurance policies meet these criteria. Further information can be obtained from the International Student Services Office.

Admission of Postbaccalaureate and Graduate Students

Requirements pertaining to the admission of postbaccalaureate and graduate students are contained in the section on Graduate Studies, Page 315.

Returning Students

Students in good standing may be readmitted to the university after an absence of one term by notifying the Office of Admissions and Records. The application and fee of \$55 are required if the student was not enrolled in any of the three terms (excluding summer session) prior to the term for which the student is seeking admission or if the student was enrolled in another institution during the absence from the California State University, San Bernardino. Enrollment through Open University or Extended Education during fall, winter or spring quarters does not constitute enrollment for this purpose. (See Leave of Absence, Page 51.)

Other Applicants

An applicant not admissible under one of the above provisions should enroll in a community college or other appropriate institution. Only under the most unusual circumstances will such applicants be permitted to enroll in the university. Permission is granted only by special action of the university.

Transfer of Credit

A maximum of 70 transferable semester units (105 quarter units) of work taken at a community college can be applied toward the requirements for a degree from the university. No upper-division credit may be allowed for courses taken at a community college. No credit may be allowed for professional courses in education taken at a community college, other than an introduction to education course.

The Office of Admissions and Records will evaluate previous college work to determine its applicability to the requirements of the university. All undergraduate degree candidates will be issued a credit summary, indicating requirements which remain unfilled. Once issued to a student, the credit summary remains valid as long as the student matriculates at the date specified, pursues the objective specified, and remains in continuous attendance. Students will not be held to additional graduation requirements unless such requirements become mandatory as a result of changes in the California Code of Regulations or the California Education Code.

Credit for work completed at institutions of recognized accreditation will be accepted toward the satisfaction of degree requirements at the university within limitations of residence and major requirements, community college transfer maximums, and course applicability.

Concurrent or Summer Enrollment—once a student has matriculated at this university, only those courses subsequently taken elsewhere that the university has articulated as being equivalent to courses offered here may be accepted as fulfilling university major or general education requirements. Students planning to take courses off campus must complete a concurrent enrollment/summer session contract and file it with the Office of Admissions and Records, giving sufficient time to receive a response prior to registering for any off-campus course work. See Page 49 for concurrent enrollment at other CSU campuses.

California Articulation Number (CAN)

The California Articulation Number (CAN) System identifies many transferable, lower division, preparation courses commonly taught on California college and university campuses.

The system assures students that CAN courses on one participating campus will be accepted "in lieu of" the comparable CAN courses on another participating campus. For example: CAN ECON 2 on one campus will be accepted for CAN ECON 2 on every other participating campus. Each campus retains its own numbering system, but adds the CAN designation parenthetically in its publications.

Check with counseling offices, departmental offices, or articulation officers for current listings of CAN courses and campuses participating in the CAN System. A CAN Catalog listing campuses and courses is published biannually.

Credit for Standardized External Examinations and Systemwide Examinations

The university shall grant four and a half quarter units of credit for each of the following College Level Examination Program (CLEP) examinations passed at the 50th percentile, provided the examination was not taken previously within the past term and that degree credit has not been granted for previous course work at the equivalent or at a more advanced level than for the examination in question.

U.S. History
Social Science
Biological Science
Physical Science
Mathematics (1975 edition)
Fine Arts
Literature

No credit will be granted for CLEP English Composition.

The university may also grant credit and advanced standing for CLEP subject examinations, using as minimum standards:

1. That the student submit a score at or above the 50th percentile in the norming group who earned a mark of "C" (2.0) or better;
2. That equivalency to CSUSB courses be determined by the appropriate academic department;
3. That college credit shall have not been previously earned in the courses in question.

Questions regarding the acceptance of other standardized external examinations should be directed to the Office of Admissions and Records.

In no case will credit awarded through external examinations count towards residence credit.

English Equivalency Examination—Students passing the California State University English Equivalency Examination shall be awarded a total of 9 quarter units of credit for English 101 and English 170, provided credit has not been granted previously at the equivalent or at more advanced levels. Further, those who pass this optional examination are exempt from the requirement to take the English Placement Test. Test results must be presented to the Office of Admissions and Records for credit to be awarded.

The total amount of credit earned on the basis of externally developed tests which may be applied to a baccalaureate degree shall not exceed 45 quarter units, except that advanced placement credit is excluded from the limit.

Credit by Advanced Placement

Students who have successfully completed courses in the Advanced Placement Program of the College Entrance Examination Board (defined as receiving a score of 3, 4 or 5) shall be granted credit for each advanced placement course toward graduation, advanced placement in the

university's sequence of courses and credit for curriculum requirements. Test results must be presented to the Office of Admissions and Records for credit to be awarded.

Credit for Extension and Correspondence Courses

A maximum of 36 quarter units of credit earned through extension and correspondence courses may be applied to a baccalaureate degree program. A maximum of 13 quarter units of graduate credit earned through extension registration may be accepted toward a master's degree program. No credit so earned may be used to satisfy the university residence requirement.

Matriculated students wanting to take correspondence courses must first have the courses approved by following the procedures outlined in the section on Concurrent or Summer Enrollment. All examinations for these courses must be proctored by the University Testing Center.

Only those credits will be accepted for transfer which are acceptable toward a degree or credential at the institution offering the courses.

Credit for Military Service

The university grants lower-division undergraduate credit for completion of basic training in the armed forces of the United States. This credit is applied to the physical education and general health requirements.

A limited amount of additional credit may be granted to students who have completed certain service schools in addition to basic training. Credit will only be evaluated if needed for admissibility or toward graduation. This credit is allowed on the basis of recommendations of the Commission on Educational Credit and Credentials of the American Council on Education and must be documented on a DD-214 or DD-295. Credit based on military rank will not be awarded.

The total amount of credit earned on the basis of externally developed tests and through recommendations of the commission, which may be applied to a baccalaureate degree, shall not exceed 45 quarter units, except that advanced placement credit is excluded from the limit.

Admission to Teaching Credential Programs

Admission to the university as a student does not constitute admission to a teaching credential program. Students who intend to work toward credentials also should make application to the School of Education.

Admission as an Auditor

A student who wishes only to audit a course instead of enrolling for credit must complete a statement of residence issued by the Office of Admissions and Records. Auditors must pay the same fees as would be charged if the courses were taken for credit.

Enrollment as an auditor is subject to the approval of the instructor. A student registered as an auditor may be required to participate in any or all classroom activities at the discretion of the instructor. Credit for courses audited will

not be subsequently granted on the basis of the audit. Transcripts are not issued for students enrolled as auditors only.

Permission to register as an auditor may be done through the Office of Admissions and Records on the first day of classes.

Admission to Summer Session

Students interested in attending summer session only do not need to file an application for admission to the university. Instructions for applying for summer session only are included in the Summer Session Bulletin. Coursework that is numbered 100-699 and completed during the regular Summer Session is considered resident credit. Attendance at summer session does not automatically constitute admission to the university for ensuing regular terms. See Page 70 for additional information.

Readmission of Previously Disqualified Students

After receiving notice of disqualification, a student may petition the director of Advising and Academic Services for readmission to the university on probation. All petitions for readmission must be submitted to the director of Advising and Academic Services according to the following schedule:

<u>Petition for:</u>	<u>Petition on file on or before:</u>
Fall	September 1
Winter	December 1
Spring	March 1

Admission on Academic Probation

An applicant with advanced undergraduate standing who does not meet the requirements is eligible for admission on probation, if, in the opinion of the proper university authorities, he is likely to succeed in college.

Ordinarily, consideration for probationary admission is granted only to the mature applicant who, while his total college record does not meet the admission requirements, has demonstrated sufficient academic ability through college work recently completed elsewhere. To be considered for admission on probation, a petition must be submitted to the Office of Advising and Academic Services.

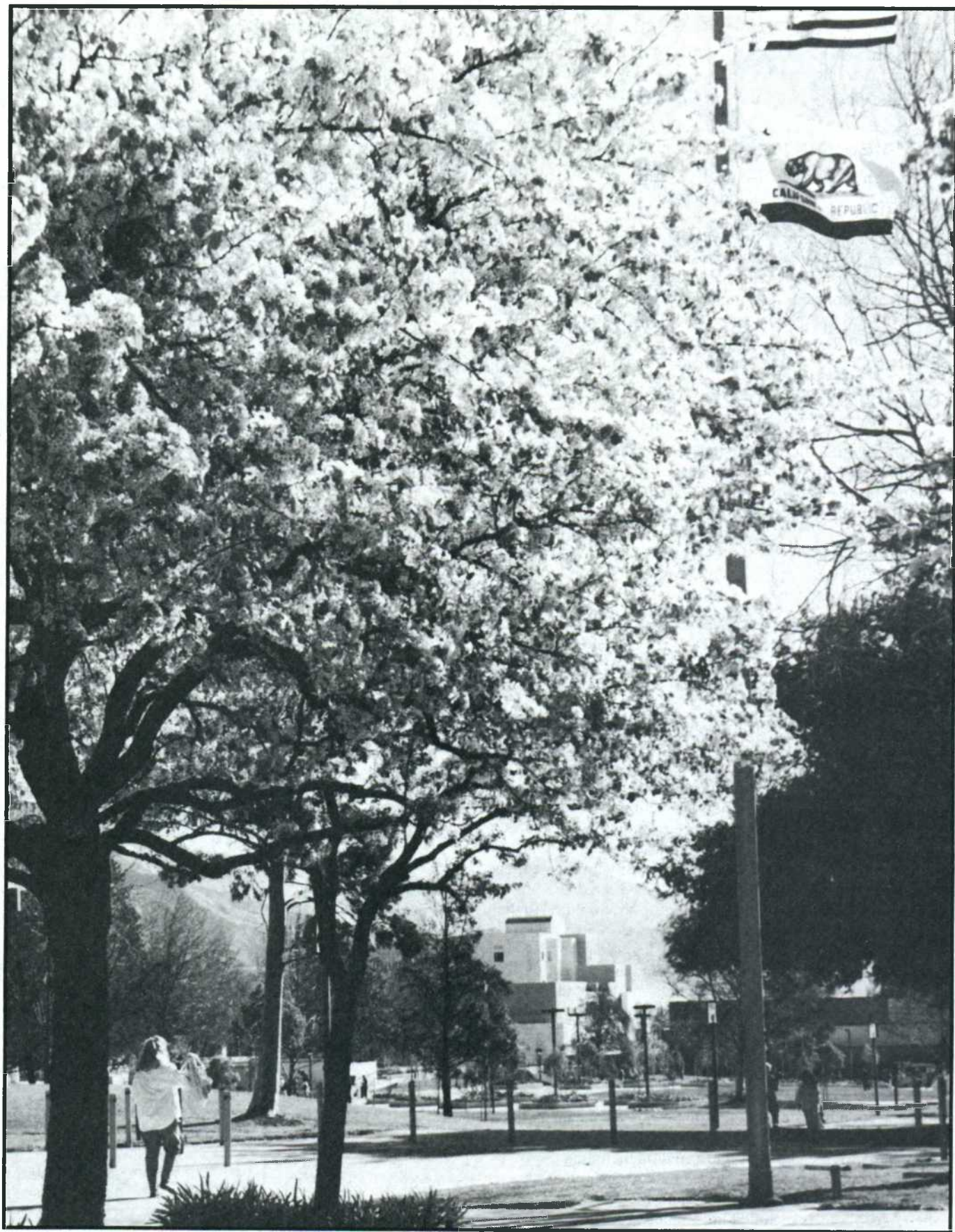
Applicants who are admitted with a grade-point deficiency are given probationary status and are subject to the probation and disqualification regulations as stated on Page 54. A student admitted on probationary status may be restricted by his advisor to a limited program.

Determination of Residence

The determination of whether a student qualifies as a resident for admission and tuition purposes is made by the university after review of a residence questionnaire, designed to provide necessary information including the applicability of any exceptions. A statement summarizing the principal rules regarding residency determination and their exceptions is included in the appendix.

Use of Social Security Number

Applicants are required to include their social security number in designated places on applications for admission pursuant to the authority contained in Section 41201, Title 5, California Code of Regulations. The social security number will be used as a means of identifying records pertaining to the student as well as identifying the student for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the university.



Fee Schedule 1995-96

Students are required to pay registration fees at registration. Tuition is not charged to legal residents of California.

Checks will be accepted at registration only for the amount of fees due. VISA and MasterCard bank credit cards may be used for payment of student fees above \$50. The application, identification card and late charge fees are nonrefundable.

The following reflects the fees and expenses for the quarter system in effect when the catalog was printed. They are subject to change:

All students

Application fee (nonrefundable, payable by check or money order at time of applying)	\$55.00
Facilities fee	2.00
State university fee (all students)	
0-6 units	306.00
6.1 or more units	528.00
Note: The following fee increase has been proposed for approval to the Legislature and the Governor to be effective in Fall quarter 1995:	
<u>Undergraduate</u>	
0 to 6.0 units	\$336
6.1 or more units	\$580
<u>Graduate</u>	
0 to 6.0 units	\$354
6.1 or more units	\$610
Duplicate degree fee (per unit)	100.00
Associated Students, Inc., fee	
Fall	14.00
Winter	11.00
Spring	11.00
Summer	5.00
Student quarterly identification card fee (nonrefundable)....	1.00
Student photo identification (library card) fee	2.00
Student union fee:	
Fall	31.00
Winter	27.00
Spring	27.00
Summer session	9.00
Health Center Service Fee	30.00
Instructionally related activities fee:	
Fall	26.00
Winter	24.00
Spring	24.00

Nonresidents (foreign and domestic)

Tuition (in addition to other fees charged all students):	
per unit	164.00
one-half unit	82.00

Residence halls (for academic year)

Room and board (19 meals per week), double room....	4,594.00
Room and board (19 meals per week), single room	5,394.00
Room and board (15 meals per week), double room....	4,380.00
Room and board (15 meals per week), single room	5,181.00
Room and board (7 meals per week), double room	4,090.00
Room and board (7 meals per week), single room	4,890.00

Summer session fees

Comprehensive Exams	96.00
Per quarter unit of credit	80.00
Field work (per unit)	155.00
Lab work (per unit)	90.00
Student Teaching (per unit)	95.00

Special fees

Credential fee	65.00
Various laboratory, activity and art studio fees (consult the <i>Class Schedule</i> for current fees)	5.00-40.00
Late registration	25.00
Failure to meet required appointment or time limit	5.00
Diploma fee	15.00
Diploma, late, first filing	20.00
Refiling	10.00
Late refiling	15.00
Diploma replacement fee	15.00
Change of Graduation Requirements	10.00
Enrollment verification	4.00
Graduation certificates	10.00
Commencement fee	15.00
Certificate fee	8.00
Change of Major	4.00
Parking fees	
Quarter: Four-wheel vehicle	36.00
Two-wheel vehicle (includes mopeds)	9.00
Summer Session: Four-wheel vehicle (per week)	3.60
Two-wheel vehicle (per week)	1.00
Check returned for any cause or credit card declined	10.00
Replacement of registration packet	2.00
Transcript of academic record	
Single transcript	4.00
Additional transcripts prepared at the same time, up to 10 transcripts, each	2.00
Additional transcripts prepared at the same time that exceeds the first 10 transcripts, each	1.00
Expedited Transcript Request	8.00
Faxing Unofficial Transcript	10.00
Library fees	schedule posted at Library circulation desk
Master's degree thesis	contact Office of Graduate Studies

Note: Fees subject to change without advance notice.

State University Fee

A state university fee has been established by the trustees of The California State University to provide financing for various student services programs not covered by state funding.

Duplicate Degree Tuition

The California State University is required by law to charge duplicate degree tuition of \$100.00 per quarter unit up to a maximum of \$1,500 to any student who has earned a degree equivalent to or higher than the degree awarded by the program in which the student is enrolled or who has earned a baccalaureate or postbaccalaureate degree and is enrolled *without* a declared degree objective.

The following categories are exempted from Duplicate Degree Tuition:

- Students pursuing master's degrees of more than 72 quarter (48 semester) units whose previous master's degree was less than 72 quarter (48 semester) units.
- A dislocated worker as certified by a state agency in accordance with Title 3 of the Federal Job Training Partnership Act.
- A displaced homemaker as defined in accordance with the Higher Education Act of 1965, as amended (20 USC 1001 et seq.).
- A person who is an enrollee in any program leading to a credential or certificate that has been approved by the Commission on Teacher Credentialing.
- A recipient of benefits under the Aid to Families with Dependent Children program, the Supplementary Security Income or State Supplementary Program, or a general assistance program.
- A nonresident student except those for whom nonresident tuition has been waived.
- CSU employees under the CSU fee waiver program.
- A California resident who is sixty years of age or older.
- Children and dependents of deceased or disabled veterans.
- Children of deceased law enforcement or fire suppression employees.

Alan Pattee Scholarships

Children of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of law enforcement or fire suppression duties are not charged fees or tuition of any kind at any California State University campus, according to the Alan Pattee Scholarship Act, California Education Code Section 68121. Students qualifying for these benefits are known as Alan Pattee scholars. Further information is available at the Office of Admissions and Records which determines eligibility.

Veterans' Dependents Exemptions

Certain dependents of U.S. veterans with service-connected disabilities and veterans who have been killed in service or died of a service-connected disability may be eligible for waiver of university fees. The annual income of the surviving parent cannot exceed \$5000. Further information is available from the veterans certification clerk.

Refund of Fees

Fees may be refunded only as authorized by Sections 42201 (parking fees), 41913 (nonresident tuition), 42019 (housing charges), and 41802 (all other fees) of Title 5, California Code of Regulations. Whether a fee may be refunded and the circumstances under which a refund is possible vary depending on the particular fee involved. Requirements governing refunds may include such matters as the reason (for example, death, disability, compulsory military service), the number of days of instruction which have elapsed before application for refund is made (for

example, during regular quarters, fall, winter, and spring requests for refund of state university fee, Associated Student, Inc. fees, Student Union fees, instructionally related activities fee, health fee and facilities fee must be made no later than 14 calendar days following the start of regular classes), and the degree to which the campus has provided the services for which the fee is charged. Details about refunds and the appropriate procedure to be followed may be obtained from the Accounting Office. The last day for refund of fees for each term appears in the *Class Schedule*. For refund policy during summer session, refer to the *Summer Session Bulletin*. For refund policy of Extended Education courses, consult the most recent *Extended Education Bulletin*.

Upon a student's withdrawal from all classes, the state university fee, the Associated Students fee, the Student Union fee, the Instructionally Related Activities fee, health fee, and the facilities fee may be refunded if written application for refund, on forms provided by the Office of Admission and Records, is submitted to the Accounting Office not later than 14 calendar days (includes Saturdays, Sundays and holidays) following the first day of classes. However, a fee shall be retained to cover the cost of processing.

Students who make changes to their program resulting in a lower fee category may receive a refund consisting of the difference in the higher and lower state university fee, except that a fee will be retained to cover the cost of processing. For further details and exact fees, refer to the quarterly class schedules.

Nonresident and duplicate degree tuition is refunded on a prorated basis during the first four weeks of instruction according to the following schedule: 100% before or during the first week of instruction, 75% during the second week, 50% during the third week, 25% during the fourth week. No refund is available after the fourth week.

Parking fees are refunded, upon surrender of the decal, according to the following prorated schedule. Regular quarter: approximately 66% during the first 25 calendar days of the quarter, approximately 33% during the 26th through 50th calendar days, no refund after the 50th day. Summer session (based on calendar days commencing on the day instruction begins): 66% refunded during the first 10 days, 33% during the 11th through 20th days, no refunds after the 20th day.

Estimated Costs per Quarter

It is estimated that full-time students each quarter pay about \$300 for books and \$410 to \$632 for fees plus parking costs.

Debts Owed to the University

Should a student or former student fail to pay a debt owed to the institution, the institution may "withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise or any combination of the above from any person owing a debt" until the debt is paid (see Sections 42380 and 42381 of Title 5, California Code of Regulations). For example, the institution may withhold permission to receive

official transcripts of grades from any person owing a debt. If a student believes that he or she does not owe all or part of an unpaid obligation, the student should contact the campus accounting office. The Accounting Office, or another office on campus to which the student may be referred by the Accounting Office, will review the pertinent information, including information the student may wish to present, and will advise the student of its conclusions with respect to the debt.

Parking Services

All vehicles parking on the campus must display a permit issued by the university. Quarterly or annual decals may be purchased from the Bursar's Office; daily permits are available from the dispenser located at the main entrance adjacent to the information booth. Visitor spaces offering free parking for up to thirty minutes are available in the main parking lots C, D and E. Drivers are cautioned to observe any restrictions posted on curbs or signs in parking areas. Parking regulations are strictly enforced at all times.

Drivers assume all risks when parking on the campus. The university and the State of California do not accept any liability for loss or damage to vehicles or property therein when parked on university property.



Academic Regulations

All students who register at California State University, San Bernardino in resident study for the fall, winter or spring quarter must first be admitted to the university by the Office of Admissions and Records.

No student may attend classes until his or her registration has been completed.

Registration is complete only when official programs are properly filed and all fees are paid. Students are required to make all payments on the regularly announced days.

Students are granted credit only for those courses in which they are formally registered and are responsible for completing all courses under their name on the schedule confirmation list, except those courses they officially change by filing a change of program with the Office of Admissions and Records.

Class Level of Students

Students are classified at the end of each quarter according to total earned credits accepted for transfer and/or completed at California State University, San Bernardino as follows:

<u>Status</u>	<u>Units earned</u>
Lower division	
Freshman	0-44.9 quarter units
Sophomore	45-89.9 quarter units
Upper division	
Junior	90-134.9 quarter units
Senior	135 quarter units or more
Postbaccalaureate	Holding a baccalaureate degree from an accredited college and not pursuing a graduate degree program
Unclassified	No degree or credential objective
Classified	Pursuing a credential
Graduate	Postbaccalaureate student pursuing a graduate degree
Conditionally classified	Completing prerequisite requirements
Classified	Admitted to the degree program

Academic Information Sessions

All new students, including entering freshmen and transfers, must attend the Undergraduate Studies Academic Information Session prior to meeting with an advisor and registering. Only students who have been admitted by the university can attend a session. Dates for these sessions are provided by the Office of Admissions and Records.

Advising and Academic Services faculty and staff conduct each session with information concerning EPT/ELM, basic skills, academic advising, registration, university rules and regulations, credit summaries and university support services.

Advising

Students must take responsibility for the decisions which affect their academic progress. Faculty and staff at the university are available to assist students by providing academic advisement during their office hours or by appointment. However, *before* a student meets with an advisor, the following steps are highly recommended:

1. Become knowledgeable about university policies, procedures and requirements.
2. Update and bring a copy of the *Credit Summary* to the advising appointment.
3. Develop a tentative course schedule using the *University Bulletin*, *Class Schedule* and *Credit Summary*.
4. Gather all relevant decision-making information such as work schedules or other time commitments.
5. Prepare a list of questions or topics to discuss with the advisor. This is a good opportunity to discuss educational and career goals.

Students have the opportunity to meet with a faculty advisor each term for help in planning their academic programs and schedules of classes. Usually, the faculty advisor is from the student's major field. To make contact with an advisor, call the appropriate department office as listed in the *Class Schedule*, which also gives information about the university's certificate and credential programs. Students who have not yet declared a major should contact Advising and Academic Services for an appointment. All students should confer with an advisor on a regular basis.

All new freshmen and transfer students are required to attend an information session and meet with an advisor prior to their first registration. Failure to do so will result in a denial of a student's registration request.

First-term undergraduate students who are placed on academic probation must confer with an Advising and Academic Services advisor prior to registration and must adhere to that advisor's specific recommendations which are designed to improve the student's grade point average.

Academic Course Load

Students planning to finish their undergraduate degree requirements in four years by attending three quarters each year must complete a minimum of 15-16 units per quarter. To be considered full-time for veteran's benefits and financial aid purposes, an undergraduate student must enroll in a minimum of 12 units. With their advisor's consent, students may carry up to 19.5 quarter units per term.

A student may carry 20 or more units only upon petition to their school dean. Course overload cards are available in each school dean's office. Normally, petitions are approved only if both the grade-point average for the previous term and the overall grade-point average are 3.0 ("B") or better.

Mandatory Basic Skills

College level skills in composition and computation are basic to success at the university. To qualify for Freshman Composition and general education mathematics courses, all new students must take the EPT/ELM tests before or during their first quarter of attendance. See page 62 for exemp-

tions. All new students who have not completed Freshman Composition and the General Education mathematics requirement (or equivalent courses) must enroll in either a Freshman Composition course (English 101) or a General Education mathematics course (Mathematics 110, 115, 120, 192 or 211) no later than their second quarter of attendance. They must then remain enrolled in one or the other course until both requirements have been completed. Students who do not qualify for enrollment in those courses must enroll in appropriate developmental courses (English 85 or 95; Mathematics 75, 85, or 90, depending on EPT/ELM scores) until they are qualified to enroll in the General Education courses.

Students must complete one of the Basic Skills courses within 48 units and all Basic Skills (Mathematics and English) within 110 units. Failure to meet these requirements will result in the student being limited to enrollment in Basic Skills courses only.

Accelerated Progress

Some students choose to accelerate progress toward completion of their objectives through a program of independent study, summer course enrollment and registration for additional course credits.

In addition, credit-by-examination procedures permit students to demonstrate their mastery of the content of local courses, as described below, or courses offered through the Advanced Placement Program or the subjects tested by the College Level Examination Program, as described on Page 40.

In some instances, registration in summer sessions permits the completion of one full quarter, 16 units, of degree-applicable work.

Students wishing to enroll for additional course work during the academic year should follow the procedures described in the section on academic course load, above.

Credit for Comprehensive Examination Courses

Any student admitted to this campus may earn degree credit for no more than three comprehensive examination courses regardless of the total units earned in those courses. This maximum is to be counted separately from all other out-of-class curriculum options (for example, credit by examination). The student's major discipline may further restrict the number of comprehensive examination credits acceptable toward the major.

In cases where the subject matter of a comprehensive examination course duplicates that of a course taken previously, the university's Repeat of Course policy will apply (see Page 54). In no instance will duplicate credit be awarded for a repetition of subject matter.

Credit by Examination

A student may petition to receive course credit by examination. In this manner a student who already possesses, or through independent study is able to acquire, the skills or knowledge of the ideas and concepts of a course can accelerate progress through the university. Students must register for the examination in the office of the school

or department concerned before the first day of classes of the term in which the course is offered. Some presumptive evidence is required to indicate that the student has a reasonable chance of passing the examination. The student must complete the examination within the first two weeks of the term. Courses may be designated by a school, department or appropriate unit as inappropriate to be challenged by examination on the basis that course content is not suited to such examination.

No fee is charged for these examinations. A student who passes an examination is given the grade of CBE (see Page 52 for definition of this grade) for that course, provided that this does not duplicate credit counted for his admission to the university. No official record is made of failures in these examinations.

Examinations for course credit are given under the following restrictions:

1. They may be taken only by students currently enrolled at the university in courses other than the one(s) to be challenged.
2. They may not be taken by students who have received credit for work in the subject in advance of the course in which the examination is requested, except where permission is granted by the school or department concerned.
3. They may not be taken to raise grades or remove failures in courses.
4. Once students have successfully challenged a course, they may not subsequently enroll in the course for credit. Units attempted, units earned and grade points for any such enrollment will be disallowed.
5. A maximum of 40 units of credit may be received through such examinations.
6. A student may repeat an examination for credit only upon approval of the associate vice president for academic programs.
7. Credit by examination may not be used to fulfill the minimum residence requirement.
8. The course must be offered during the term in which the examination is taken. However, students may not enroll in a course they plan to challenge. If the challenge is unsuccessful, the student may add the course subject to the regulations for adding a class printed in the *Class Schedule*.

Exact times and places of examinations are announced by the departments concerned. Students who wish to take an examination should consult the departmental office well in advance.

Credit by examination cannot be earned during the summer sessions.

For regulations concerning credit by examination in graduate programs refer to Page 323.

Concurrent Enrollment

Procedures have been established whereby a student in good academic standing at the California State University, San Bernardino who has completed at least 18 quarter units of work at the university and who is eligible to register as a continuing student for the immediately subsequent term may enroll concurrently at another campus of The California

State University system. The procedure enables a student to attend another campus within the system, on a term-by-term basis, without submitting the formal application for admission form and paying the \$55 application fee. For information regarding the procedure, contact the Office of Admissions and Records.

To guarantee acceptance, for degree credit, of work taken at institutions other than those within The California State University system, a student must complete a concurrent enrollment/summer session contract. These contracts are reviewed by the evaluators in the Office of Admissions and Records. See Page 39 for concurrent enrollment (Transfer of Credit) at other institutions.

ROTC Programs

The Army ROTC is a two or four year program which leads to a commission in the U.S. Army and trains students for positions of responsibility in the active Army, Army Reserve, or National Guard. The university has the only ROTC program in San Bernardino and Riverside counties. Scholarships, simultaneous enrollment in the National Guard or Army Reserve, specialized summer training, and other challenging activities are some of the benefits of the program. Students may attend ROTC classes on this campus, and attend any of the other two- or four-year colleges in the area. For more information about Army ROTC at CSUSB, consult the Military Science portion of the catalog, or contact the ROTC Office, Health and Physical Education Building, 880-5533.

The Air Force Reserve Officer Training Corps (ROTC) is an educational program designed to give men and women the opportunity to become an Air Force officer while completing a bachelor's or graduate degree. The Air Force ROTC program is designed to prepare students to assume positions of increasing responsibility and importance while on active duty in the Air Force. Multi-year scholarships are available for books, tuition, and fees associated with various major fields of study. Students may attend ROTC classes on campus while enrolled in any of the area's two or four year colleges. For more information contact the Aerospace Studies Department, Health and Physical Education Building, 880-5440.

Cross-Registration with University of California at Riverside

On a limited basis, students may be permitted to take advantage of courses offered at the nearby University of California campus in Riverside. Note that this opportunity is available only for undergraduate courses not normally offered at CSUSB and is subject to availability of space at UC Riverside after their early registration process is completed.

The following conditions apply:

1. A limited number of students may participate.
2. A limit of one course per student per quarter.
3. The student is matriculated and currently enrolled, in a degree program.
4. Student must pay sufficient (full) fees at the Home Campus. No additional registration fees will be required at the Host Campus.

5. The desired course is not offered at the Home Campus.
6. Student must be in good academic standing.
7. Student must observe all academic deadlines and regulations of the Host Campus.
8. Enrollment is subject to space availability and consent of the instructor.
9. Student must meet course prerequisites of the Host Campus.
10. Records of grades will be maintained by the Host Campus and forwarded to the Home Campus. The Home Campus will include the "transfer" work on the student's transcript, with a footnote indicating that the course was taken through the exchange program.
11. Residence credit will be granted for courses taken by CSUSB students under this arrangement.
12. Cross-registration students will have the use of library facilities at the Host Campus. The student is not eligible for other student services or facilities.

Check with the Office of Admissions and Records for more details and application form.

Class Schedule

An official *Class Schedule*, prepared each quarter by the university, includes the registration schedule, procedure for registration, fees, classes offered by hours and instructors, and other pertinent registration information. The schedule is available just prior to advisement and early registration each quarter and may be purchased at the Coyote Bookstore. Students are responsible for being aware of information contained in the *Class Schedule*.

Registration Procedures

All registration, including schedule adjustments (adds and drops) and late registration, will be accomplished by students using touchtone telephones (TRACS). It is essential that students follow the required telephone registration procedures and conform to established deadlines as given each quarter in the *Class Schedule*.

Late Registration

The dates of late registration each term will be announced in the *Class Schedule*. The university calendar, pages 4-5, lists registration dates. Late registrants may find themselves handicapped in arranging their programs due to closed classes. A \$25 late registration fee is required.

Adding Classes

Beginning with the first day of the schedule adjustment period, all students may add classes, subject to appropriate approvals, continuing up to and including the last day to add classes. (See the *Class Schedule*.)

Auditing Courses

Enrollment in any course as an auditor shall be permitted only after students otherwise eligible to enroll in the course on a credit basis have had an opportunity to do so and only upon consent of the instructor. Auditors are subject to the same fee structure as credit students, and regular class attendance is expected.

Credit for courses audited will not subsequently be granted on the basis of the audit. Transcripts are not issued for audited courses.

Once enrolled as an auditor, a student may not change to credit status unless such a change is requested within the first week of class and is approved by the instructor. Students registered for credit may change their status from that of an enrolled student to that of an auditor with the approval of the instructor concerned and within the first three weeks of class.

Forms for such changes may be obtained at the registration counter in University Hall.

Class Attendance

Regular attendance is expected of all students enrolled at the university. The instructor of each class sets specific standards expected of students.

A student absent from classes is responsible for arranging to make up missed class work and assignments. In cases of prolonged absence, the student should investigate the feasibility of withdrawal from the university. (See below.)

Administrative Drop Policy

Faculty members *may* initiate an administrative drop of a student in their courses based on the following criteria.

Lack of attendance - students who fail to attend two consecutive class meetings during the first two weeks of the term without contacting the faculty member or making special arrangements.

Prerequisites not met - students must be able to show completion of required courses and have the background needed to succeed in the course.

Declared majors - certain courses are open only to students who have been formally admitted to the major program. Special permission and signature of department chair may be required.

Students who are administratively dropped will receive a notice in the mail. **Students should not assume they are automatically disenrolled unless written confirmation is received.** After the drop is initiated, other students will be permitted to add the class if it was closed.

If the administrative drop reduces the student's unit load to a lower fee level, it is the student's responsibility to file a request for a refund of fees by the deadline printed in the *Class Schedule*. Questions regarding refunds should be addressed to the Accounting Office at 880-5153.

Withdrawal from a Class or the University

(See *Class Schedule* for details.)

Students are assigned grades for every course in which they have enrolled.

If a student withdraws officially from the university or from a class by the end of the third week of class (see university calendar for exact date), the course is not recorded on the permanent record.

Withdrawal after the third week is permissible only for

serious and compelling reasons. Permission to withdraw during this time period must be obtained from the instructor and the school dean.

Withdrawal will not be permitted during the final three weeks of instruction except in cases such as documented personal problems, accident, serious illness, employment change or military orders, where the cause of withdrawal is due to circumstances clearly beyond the student's control and the assignment of an Incomplete grade is not practicable. Withdrawal during this period requires the approval of the instructor and the school dean.

A grade of "W" will be assigned for approved withdrawals occurring after the third week of instruction.

Retroactive Withdrawal

Requests for withdrawal from a course(s) following the close of the term (retroactive withdrawal) will be considered only for: accident or illness (physical or mental), serious personal or family problems, or military transfer. Documentation is required. In addition, extenuating circumstances must be shown to have prevented withdrawal in a more timely fashion. Partial withdrawal of grades during a term is not permissible for any reason. All courses must be withdrawn and will be noted with a "W" on the official transcript. Lack of awareness of the withdrawal procedures is not an extenuating circumstance.

Employment-related reasons are acceptable only for withdrawals processed during the term in question.

Requests by undergraduates and unclassified post-baccalaureate students must be made in writing to the Director of Advising and Academic Services, UH-380. Requests by credential candidates and graduate students must be made in writing to the Dean of Graduate Studies, AD-127.

Leave of Absence

Any student who plans to be absent from the university for **more than two terms** must file a leave of absence to preserve the student's current catalog rights (Title 5, Article 5, Sec. 40401). A petition must be filed and approved at the office of Advising and Academic Services.

The leave of absence policy covers interruptions which are involuntary (medical) or voluntary (military, personal or planned educational leave) if related to the undergraduate student's educational objective. With an approved leave of absence, the student may be absent from the campus without losing rights to specific degree requirements under an earlier catalog, which may be more advantageous for the student.

Petitions for leaves of absence should be filed in advance of the interruption in enrollment. While medical and military leaves may be considered retroactively if supported by individual circumstances, planned educational leaves cannot since they constitute an agreement or "contract" which must be set in advance.

An application for readmission must be filed by students returning from leaves of one or two terms only if another college or university was attended during the absence.

Students returning from a medical or military leave of absence of more than two terms must file an application for

admission and must also pay the current application fee. The maximum duration of a Planned Education Leave is two calendar years, with no application fee charged at readmission within the two-year limit. Applications for readmission must be filed within the filing period for the term of return. Filing periods for fall term begin the preceding November 1, for winter term the preceding June 1, and for spring term the preceding August 1.

Students who do not return to CSU, San Bernardino at the conclusion of their planned leaves and those who enroll elsewhere without permission of the Admissions and Records Office will be considered to have withdrawn from the university at the end of their last term of regular enrollment.

Leaves of absence will not be approved for students subject to disqualification or dismissal due to academic deficiencies or disciplinary action. Disqualified students reinstated immediately or readmitted after one term may retain catalog rights.

Students not completing any degree applicable course work or who are enrolling only in Summer Session or extension courses or who are auditing courses are not eligible for leaves of absence.

Medical Leave of Absence: requests must be accompanied by a statement from a medical doctor explaining why the student must interrupt enrollment. No limit exists on the number of terms of absence allowed, except that leaves for pregnancy are restricted to the term of delivery unless verified medical circumstances indicate a longer time is required for a recuperation. **An application fee is charged at readmission for a leave of three or more terms.**

Military Leave of Absence: requests must be accompanied by a copy of military orders indicating induction date. Twelve terms of absence are the maximum that can be approved. **An application fee is charged at readmission for a leave of three or more terms.**

Planned Educational Leave of Absence: is defined as a planned interruption or pause in a student's regular education during which the student temporarily ceases his or her formal studies at CSU, San Bernardino to pursue other activities that contribute to particular educational goals and objectives. This will not jeopardize the rights and privileges normally associated with continuous attendance. The student must plan to return to CSU, San Bernardino at the end of the leave. Such activities may be for the purpose of clarifying or enriching educational goals and may include travel for educational purposes, on-the-job experience in the area of vocational or educational opportunities, or undertaking expanded responsibilities in an activity related to the student's educational or career goals.

Since students will maintain their catalog rights as when they left, they **MUST** take courses that would transfer back. Therefore, a student must also file a concurrent enrollment form with the Office of Admissions and Records for prior approval on the courses they plan to take. Students under an Educational Leave who do not file a concurrent enrollment form and who take courses which are not transferable, (i.e. for G.E. Certification from a Community College) would fall under any revised G.E. and major requirements when they return.

A planned leave may also be taken to allow time for the solution of personal problems and thus enhance the prospect of successful completion of the student's academic program. **No application fee is charged at readmission for a leave within the two year limit with an approved Planned Educational Leave of Absence.** Postbaccalaureate students are eligible for a leave of absence.

Final Examinations

Written examinations of two hours' duration are held at the close of each term. In courses extending over more than one term, the examination in the concluding term may also cover work done in the preceding term or terms. Examinations may not be taken before or after the scheduled period nor may the time of an examination be changed without authorization by the dean of the appropriate school. Permission to take a final examination with a different section in the same course may be granted by the dean of the appropriate school with the consent of the instructors concerned. Failure to take or to pass any final or other course examinations will result in such deficiencies as instructors may assign.

Final Grade

Final grades will be available to students within two weeks after the last day of each quarter. Grades are accessed through TRACS.

Grievance Procedures

Information concerning academic matters may be obtained from Advising and Academic Services. Generally, a grade grievance must be initiated by the student within no more than 40 calendar days after the grade is recorded. The complete policy statement is available at Advising and Academic Services.

Information concerning nonacademic matters may be obtained from the Office of the Vice President for Student Services. Advisement and nonacademic grievance policies are available there.

Grades

The grade symbols used at the university are as follows:

Grade symbol	Performance level	Grade points per quarter hour
A	Excellent	4.0
A-		3.7
B+		3.3
B		3.0
B-	Good	2.7
C+		2.3
C		2.0
C-		1.7
D+	Satisfactory	1.3
D		1.0
D-		.7
F		.0
CR	Failing	
NC	Credit	
	No Credit	

All courses, except those specifically designated otherwise, will be graded on the A through F basis.

Grade-point averages are computed by dividing the number of grade points earned by the number of units attempted. Only units and grade points earned by a student while enrolled at this university are used to compute the resident grade-point average. Grades from courses numbered 1-99 are not computed in this average.

The following administrative grades carry no grade points and are, therefore, not used to determine a student's grade-point average. However, it should be pointed out that the Incomplete will be counted as an F if not removed within one calendar year from the date it was assigned.

CBE	Credit by Examination
I	Incomplete (Authorized)
RD	Report Delayed
SP	Satisfactory Progress
W	Withdrawal

The administrative grade of U carries no grade points but is included in determining units attempted. Thus, it is equivalent to an F.

Expanded Grade Symbol Definitions

A (Excellent): Meeting course requirements with a superior level of performance. A is recognized to be an honors evaluation.

B (Good): Meeting course requirements with a high level of performance.

C (Satisfactory): Meeting course requirements with an acceptable performance.

D (Passing): Meeting course requirements with minimally adequate performance.

F (Failing): Inadequate performance or not meeting course requirements.

CR (Credit): A satisfactory or better level of performance, equivalent to the grade of "C" (2.0) or better, has been demonstrated in meeting course objective. For graduate courses, equivalent to grade of "B" (3.0) or better.

NC (No Credit): Performance at an unsatisfactory or failing level, equivalent to a grade of "C-" (1.7) or less. For graduate courses, equivalent to a grade of less than "B" (3.0). Does not award credit for the course.

CBE (Credit by Exam): This symbol indicates that a student has successfully passed a course through an examination. It is not included in the calculation of grade-point averages.

I (Incomplete): An Incomplete signifies that a portion of required course work has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified, reasons and that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the instructor and to reach agreement on the means by which the remaining course requirements will be satisfied. A final grade is assigned when the work agreed upon has been completed and evaluated.

An Incomplete must be made up within one calendar year immediately following the end of the term in which it was assigned. This limitation prevails whether or not the student maintains continuous enrollment. Failure to com-

plete the assigned work will result in an Incomplete being counted as equivalent to an F (or an NC) for grade-point average computation. Note: In some instances the instructor may have indicated on the Incomplete Form a grade to be assigned in the eventuality that the remaining course work is not completed.

RD (Report Delayed): The RD symbol is used in those cases where a delay in the reporting of a grade is due to circumstances beyond the control of the student. The symbol is assigned by the Office of Admissions and Records and is replaced by a more appropriate grading symbol as soon as possible. An RD is not included in the calculation of grade-point averages.

SP (Satisfactory Progress): The SP symbol is used in connection with courses which extend beyond one academic term. The symbol indicates that work in progress has been evaluated as satisfactory to date but that the assignment of a precise grade must await the completion of additional course work. Cumulative enrollment in units attempted may not exceed the total number applicable to the student's educational objective. All undergraduate work is to be completed within the time specified but not to exceed one calendar year of the term of first enrollment, and a final grade will be assigned to all segments of the course on the basis of overall quality. The time limitation for graduate degree theses may be up to two years but may not exceed the overall time limit for completion of all master's degree requirements. Extension of any time period requires prior authorization by the Dean of Graduate Studies.

U (Unauthorized Incomplete): The symbol U indicates that an enrolled student did not withdraw from the course but failed to complete course requirements. It is used when, in the opinion of the instructor, completed assignments or course activities or both were insufficient to make normal evaluation of academic performance possible. For purposes of grade-point average, this symbol is equivalent to an F.

W (Withdrawal): This symbol indicates that the student officially dropped the course. It carries no connotation of quality of performance and is not used in calculating grade-point average.

Policy on Nontraditional Grading

All courses are graded on an A through F basis, except those specifically designated as follows:

Credit/No Credit. Credit is awarded for grades equivalent to "C" (2.0) or better. No credit is awarded for grades equivalent to C- or less.

ABC/No Credit. Grades awarded are A, A-, B+, B, B-, C+ or C. No credit is awarded for grades equivalent to C- or less.

Certain activity courses, independent study projects, and other courses serving special needs are not readily evaluated in the traditional A through F manner. The non-traditional Credit/No credit grading allows faculty to award credit for satisfactory performance in an activity, rather than assign a letter grade when such performance cannot be evaluated traditionally.

Courses graded Credit/No credit, whether taken at this or at another institution, may not be used to satisfy require-

ments for the major, except specific courses designated by the department to be graded Credit/No credit.

Students who, because of a change of major or because of transfer from another institution or for any other reason, present courses in the major field which have been graded on a Credit/No credit basis may, at the discretion of the department or other appropriate academic unit, be required to pass competency examinations at an acceptable level or to take prescribed alternate courses before being allowed to continue in the major.

A student may offer no more than 36 quarter units of work graded Credit/No credit in satisfaction of the total units required in the student's baccalaureate degree program at California State University, San Bernardino. This number includes any combination of units graded Credit/No credit earned at California State University, San Bernardino and any other institution or institutions, excepting that all units accepted for transfer credit from another institution at the time of the student's admission to the university may be used toward the satisfaction of the total units required for the baccalaureate degree. Acceptance for transfer credit by California State University, San Bernardino of 36 quarter units or more graded Credit/No credit at another institution or institutions precludes the student from offering courses graded Credit/No credit at California State University, San Bernardino, for satisfaction of units required for the baccalaureate degree.

Course grades of credit received under a credit-by-examination program are exempt from the 36-unit limitation.

Scholarship Standards for Undergraduates

For purposes of determining a student's eligibility to remain at the university, quality of performance toward the student's objective shall be considered. Such eligibility shall be determined by use of grade points and grade-point average.

1. An undergraduate student shall be subject to probation if, in any academic term, the student fails to maintain either a cumulative grade-point average or a grade-point average at California State University, San Bernardino of at least 2.0 (grade of "C").
2. An undergraduate student shall be subject to disqualification if while on probation the student's grade-point balance either cumulative or at California State University, San Bernardino displays a deficiency in excess of the number permitted for the student's class level pursuant to deficiency levels established by the chancellor. Disqualification levels are as follows:
 - a. Lower-division student (fewer than 90 quarter units of college credit), 22.5 grade points below a 2.0 ("C") average in all units attempted or in all units attempted at California State University, San Bernardino;
 - b. Junior (90 to 134.9 quarter units of college work), 13.5 grade points below a 2.0 ("C") average in all units attempted or in all units attempted at California State University, San Bernardino;

- c. Senior (135 or more quarter units of college work), 9 or more grade points below a 2.0 ("C") average in all units attempted or in all units attempted at California State University, San Bernardino.
3. An undergraduate student who is not on probation may be disqualified if at any time the student's cumulative grade-point average falls below 1.0 (grade of "D") and, in the opinion of the appropriate campus authority, it is unlikely in light of the student's overall educational record that the resultant grade-point deficiency will be removed in subsequent terms.

A student disqualified for scholarship deficiency may not enroll in any regular term of the university without having successfully petitioned for readmission through the Office of Advising and Academic Services, and may be denied admission to other educational programs operated or sponsored by the university.

Administrative Academic Disqualification

An undergraduate or graduate student may also be placed on probation or may be disqualified by appropriate campus authorities for unsatisfactory scholastic progress regardless of cumulative grade-point average or progress points. Such action shall be limited to those arising from repeated withdrawal, failure to progress toward an educational objective and noncompliance with an academic requirement and shall be consistent with guidelines issued by the chancellor.

Repeat of Courses: Undergraduates

1. The discounting of a grade in a repeated course is by petition only. Petitions should be filed after completion of the course for the second time. Discounting, as used in these guidelines, means that when computing grade point averages required for graduation with a baccalaureate degree, "units attempted" and "units passed" (if any) for a previous attempt shall be excluded.
2. Students may repeat a course only once in order to have the first grade discounted. The grade earned in the second attempt will be the grade used. Repetitions subsequent to the second attempt will be averaged when determining cumulative grade point averages.
3. The grades in no more than five different courses may be discounted by repeating them.
4. A course may not be repeated for the purpose of removing an Incomplete. Incompletes that have changed to a letter grade or are now being counted as equivalent to an F may be discounted on repeat.
5. Students on dismissal may repeat a course through the Extended Education Open University program and petition to have the grade earned treated as though it were taken in residence.
6. If the course which was taken at CSUSB is repeated elsewhere, the grades will be averaged in determining a student's overall grade point average. Repeating a course elsewhere will have no effect on a student's CSUSB grade point average.
7. Grades for courses taken at one institution (other than CSUSB) and repeated at another institution (other than CSUSB) will be averaged when determining a student's cumulative transfer grade point average.
8. CSUSB will honor the repeat-of-course policy in effect at the institution issuing the transfer transcript.
9. Students may repeat courses transferred from other institutions at CSUSB and the transfer grade will be discounted if provisions of the pertinent preceding guidelines are met. Course equivalency will be determined by the evaluation section of the Office of Admissions and Records or by the department offering the course.

Unless expressly allowed, credit may not be awarded for a course that has been previously completed, either at California State University, San Bernardino, or elsewhere, unless a petition is filed to discount the first attempt.

Graduate students refer to Page 319. Contact Advising and Academic Services, UH-380, 880-5034, for questions regarding grade discounts.

Academic Renewal

Under certain circumstances, a student may petition to have up to two semesters or three quarters of previous course work disregarded from all considerations associated with requirements for the baccalaureate degree. In order for this to happen the following conditions must be met:

1. The work to be disregarded must have been completed at least five years before the date of the petition to disregard it.
2. The student has completed all GE, major and elective requirements with the *exception* of the cumulative and/or CSUSB GPA of 2.0. The student must demonstrate that it would be necessary to complete additional units and enroll for one or more additional terms in order to qualify for the baccalaureate if the request were not approved.
3. During the interval since completing the work to be disregarded, the student must have maintained a satisfactory record at CSUSB (22 units with at least a 3.0 GPA; 45 units with at least a 2.5 GPA; or 67 units with at least a 2.0 GPA).

Students seeking academic renewal should consult with the Director, Advising and Academic Services.

Plagiarism and Cheating

Plagiarism and cheating are violations of the Student Discipline Code (see Appendix) and may be dealt with by both the instructor and the Coordinator of Student Conduct. Procedures for addressing cheating and plagiarism are found in the policy on academic dishonesty. Questions about academic dishonesty and the policy should be addressed to the Office of the Vice President, Student Services.

Plagiarism is the presentation as one's own, the ideas and writing of another. Plagiarism is academically dishonest and subjects the offending student to penalties up to and including expulsion. Students must make appropriate acknowledgments of the original source where material written or compiled by another is used.

Declaring (or changing) a Major

Work in a major field of study is designed to afford students the opportunity to engage in intensive study of a discipline.

Students may declare a major at the time of admission.

Students entering the university as "undeclared" or those changing their majors should process a Change of Major form through the Office of Admissions and Records. Before submitting the Change of Major, students should contact an advisor in the new major for advising. Students who declare a major or change from one major to another following admission will be held to either:

- the current catalog for requirements of the major and to the catalog under which they entered for other college requirements (for example, general education), or
- the catalog in effect at the time of graduation for all requirements.

A processing fee will be assessed each time a student files a Change of Major form. (See *Class Schedule* for fee.)

Election of Graduation Requirements

A student remaining in continuous attendance in regular sessions and continuing in the same curriculum in this university, in any of the California community colleges, or in any combination of California community colleges and campuses of the California State University, may, for purposes of meeting graduation requirements, elect to meet the graduation requirements in effect at this university either at the time of entering the curriculum or at the time of graduation from this university, except that substitutions for discontinued courses may be authorized or required by the proper university authorities. (See *Leave of Absence*, Page 51.)

Postbaccalaureate Credit for Senior Students

A student, for the term (including summer) in which he or she receives the baccalaureate degree, will be granted postbaccalaureate credit for any course taken at California State University, San Bernardino numbered 300 or above which is not needed to meet undergraduate degree requirements. Students not wishing to receive postbaccalaureate credit for such courses must file a petition in Advising and Academic Services, UH-380, to have the work included in their undergraduate program. Postbaccalaureate credit will not be granted for courses numbered below 300 or for courses numbered 300 or above taken in advance of the last undergraduate term.

Information for Issuance of Transcripts

Single transcripts are issued at a cost of \$4 per copy, payable in advance. (Refer to fee schedule in the *Class Schedule* or this catalog for fees for multiple copies.)

All transcripts will be complete as of the date of issuance showing all work attempted at California State University, San Bernardino.

Copies are normally mailed two weeks after receipt of request. However, if the request specifies inclusion of grades just earned or verification of a degree just awarded, two to three weeks must be allowed beyond the end of the term for a transcript to be issued.

Access to Records

All student records, including recommendations, are kept by the university in accordance with the Family Educational Rights and Privacy Act of 1974, which allows students access to their records. Inquiries and concerns about this federal regulation should be directed to the Office of the Vice President for Student Services for further information.

Veterans Information and Enrollment Certification

California State University, San Bernardino, is approved for the training of veterans of the military services and their dependents under educational assistance programs, established by the state and federal governments. Applications for educational benefits may be obtained directly from the veterans certification clerk in the Office of Admissions and Records.

Student enrollment certification is based on the following minimum unit loads for undergraduates:

Full time	12 quarter units
3/4 time	9-11.5 quarter units
1/2 time	6-8.5 quarter units

The university will certify course loads to the Veterans Administration based on the criteria above for units which are degree or objective applicable. Veterans enrolled less than half time are eligible for reimbursement of tuition and fees only.

Independent study and self-paced courses will be certified for monthly educational benefits when the student is concurrently enrolled in residence and independent study courses. The independent study and self-paced courses will be reported at full value up to a maximum of five units. Students enrolled in independent study or self-paced courses exclusively are eligible for reimbursement of tuition and fees only.



Undergraduate Degree Requirements

To be eligible for the bachelor's degree, a student must:

1. Complete a minimum of 186 quarter units of college credit. Some majors require more than 186 quarter units to a maximum of 198.
2. Complete 86 quarter units in general education distributed in the manner outlined in the following section titled General Education Program Requirements. Satisfactory scores on the English Placement Test and the Entry Level Mathematics exam are prerequisites for enrollment in the following general education courses: (Refer to Page 62.)

Eng 101.	Freshman Composition
Math 110.	College Algebra
Math 115.	The Ideas of Mathematics
Math 120.	Pre-Calculus Mathematics
Math 192.	Methods of Calculus
Math 211.	Basic Concepts of Calculus
3. Complete all requirements for a major, including at least 20 quarter units of upper-division course work in the major.
4. Complete at least 45 quarter units at this university. (Refer to University Residence Requirement for Graduation, Page 63.)
5. Complete at least 60 quarter units of upper-division work.
6. Earn a grade-point average of 2.0 ("C") or better in all units used to fulfill the requirements of the major.
7. Earn a grade-point average of 2.0 ("C") or better in all units attempted, and in all units attempted at the university.
8. Complete two quarter units of physical education course work as required in the general education program. Ten additional units of physical education activity courses (numbered 150 and below) for a total of 12 units maximum may be applied toward graduation.
9. Complete the upper-division writing requirement. (Refer to Page 61.)
10. Complete the history, constitution and government requirement. (Refer to History, Constitution, Government Requirement, Page 61.)
11. Be recommended for graduation by the faculty of the university.
12. An application for graduation must be on file prior to the end of the term of graduation.

GENERAL EDUCATION PROGRAM Requirements (86 units)

The general education requirements at California State University, San Bernardino are designed to assure that all graduates of the university, whatever their major, have acquired certain essential skills and a broad range of knowledge appropriate to educated persons in our society.

Lower-division courses are intended to foster an ability to think clearly and logically, to find and critically examine information, and to communicate, at an appropriate level, orally and in writing; to acquaint students with the physical universe and its life forms and to impart an understanding

of scientific methodology and of mathematical concepts and quantitative reasoning; to cultivate—through the study of philosophy, literature, languages, and the arts—intellect, imagination, sensibility and sensitivity; and to deal with human social, political and economic institutions and their historical background, with human behavior and the principles of social interaction. Upper-division courses include a further requirement in writing and new integrative capstone courses designed to provide students with an understanding of the interrelationships among disciplines and their applications to contemporary environments. Multicultural and gender issues are given special attention in these courses.

The purpose of general education is less to provide students with a number of possible avenues for specialization, than it is to make sure that all students will be able to write, speak and think clearly, to understand the issues on which they will have to make decisions, and to know something about themselves and the world in which they live.

The general education program requires a minimum of 86 quarter units.

No substitutions in the general education program are possible without prior approval of a petition submitted to the Office of Advising and Academic Services.

Some majors require specific GE courses. Students should consult the catalog for their major's requirements or contact the department.

Requirements for General Education Program

Note: Courses in Category A should be completed before a student reaches upper-division standing. For upper-division transfer students, this category should be completed within the first 32 units taken at California State University, San Bernardino.

A. Basic Skills Category (12 units)

1. Written Communication

Four units chosen from:

- Eng 101. Freshman Composition (4)
- Hon 103. Language and Meaning (4)*

2. Oral Communication

Four units chosen from:

- Comm 120. Oral Communication (4)
- Hon 103. Language and Meaning (4)*

3. Mathematics

One course listed in the mathematics section of the natural sciences breadth area (category B1).

4. Critical Thinking

Four units chosen from:

- Comm 180. Critical Thinking Through Argumentation (4)
- Hon 103. Language and Meaning (4)*
- Math 180. Critical Thinking Through Problem Solving (4)
- Phil 105. Critical Thinking Through Argument Analysis (4)

- Phil 205. Critical Thinking Through Symbolic Logic (4)
- Psyc 105. Critical Thinking Through Problems Analysis (4)
- Soc 180. Critical Thinking About Social Problems (4)

B. Natural Sciences Breadth Area (20 units)

1. Mathematics

Four units chosen from:

- Math 110. College Algebra (4)
- Math 115. The Ideas of Mathematics (4)
- Math 120. Pre-Calculus Mathematics (4)
- Math 192. Methods of Calculus (4)
- Math 211. Basic Concepts of Calculus (4)

2. Life Sciences

Five units chosen from:

- Biol 100. Topics in Biology (5)
- Biol 200. Biology of the Cell (5)
- Biol 250. Biology of Ecosystems (5)
- HSci 120. Health and Society: An Ecological Approach (5)

3. Physical Sciences

A minimum of five units chosen from:

- Chem 100. Chemistry in the Modern World (5)
- Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
- Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
- Geog 103. Physical Geography (5)
- Geol 101. Physical Geology (5)
- Phys 100. Physics in the Modern World (5)
- Phys 103. Descriptive Astronomy (5)
- Phys 121. Basic Concepts of Physics I (5)
- Phys 221. General Physics I (5)

4. Special Topics in Science and Technology

Two units chosen from:

- Biol 216. Genetics and Society (2)
- Biol 217. Biology of Sexually Transmitted Diseases (2)
- Chem 105. Chemicals in Our Environment (2)
- CSci 121. Computer Technology and People (2)

5. Integrative Capstone in the Natural Sciences

Four units chosen from:

- NSci 300. Science and Technology (4)
- NSci 310. The Environment and Human Survival (4)
- NSci 312. Scientific Contributions to the Development of Civilization (4)
- NSci 314. Life in the Cosmos (4)
- NSci 320. Energy (4)
- NSci 325. Perspectives on Gender (*also counts in category H1*) (4)
- NSci 351. Health and Human Ecology (4)
- NSci 360. Legacy of Life (4)

Note: Students may receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender
- NSci 325. Perspectives on Gender
- SSci 325. Perspectives on Gender

* Open only to students accepted in the University Honors Program.

The entire Honors 103A, 103B, 103C sequence must be completed before the student will be granted General Education credit in any Basic Skills category.

C. Humanities Breadth Area (20 units)**1. Arts***Four units chosen from:*

- Art 200. Studies in Art (4)
 Hum 180. The Art of Film (4)
 Mus 180. Studies in Music (4)
 TA 260. Introduction to Theatre (4)

2. Literature*Four units chosen from:*

- Eng 110. World Literature I (4)
 Eng 111. World Literature II (4)
 Eng 160. World Drama (4)
 Eng 170. Studies in Literature (4)
 TA 160. World Drama (4)
 TA 212. Oral Interpretation of Literature (4)

3. Foreign Language or Literature in Translation*Four units chosen from:*

- FLan 102. Independent Language Study II (4)
 FLan 150. Independent Intermediate Language Study (4)
 Fren 102. College French II (4)
 Fren 150. Intermediate French (4)
 Fren 212. Composition (4)
 Fren 214. Conversation (4)
 Fren 216. Introduction to Literary Texts (4)
 Fren 290. French Literature in English (4)
 Ger 102. College German II (4)
 Ger 150. Intermediate German (4)
 Ger 212. Composition (4)
 Ger 214. Conversation (4)
 Ger 216. Introduction to Literary Texts (4)
 Ger 290. German Literature in English (4)
 Span 102. College Spanish II (4)
 Span 150. Intermediate Spanish (4)
 Span 155. Intermediate Spanish for Spanish Speakers (4)
 Span 212. Composition (4)
 Span 214. Conversation (4)
 Span 216. Introduction to Literary Texts (4)
 Span 290. Spanish and Latin American Literature in English (4)

Note: Credit toward the foreign language or literature in translation category will only be awarded for:

FLan 102. Independent Language Study II

Fren 102. College French II

Ger 102. College German II

Span 102. College Spanish II

General education credit will be given in category H for:

FLan 101. Independent Language Study I

Fren 101. College French I

Ger 101. College German I

Span 101. College Spanish I

To be eligible for general education credit for 102, a student must have less than two years of high school study of the language selected in category C3.

4. Philosophy*Four units chosen from:*

- Phil 190. Introduction to Philosophical Issues (4)
 Phil 191. Introduction to Values, Technology and Society (4)
 Phil 192. Introduction to Philosophy of Religion (4)
 Phil 193. Introduction to Eastern Philosophy (4)
 Phil 194. Introduction to Knowledge and Reality (4)

5. Integrative Capstone in the Humanities*Four units chosen from:*

- Hum 319. Myth, Metaphor and Symbol (4)
 Hum 325. Perspectives on Gender (*also counts in category H1*) (4)
 Hum 330. Arts and Ideas (4)
 Hum 335. The Origin and Contemporary Role of Latino Culture (*also counts in category H1*) (4)
 Hum 340. Interpretation and Values (4)
 Hum 344. Ideas in American Culture (4)
 Hum 380. Comparative Studies in the Arts and Literature of Western and Non-Western Cultures (4)
 Hum 385. A Cultural History of Fashion (4)

Note: Students may receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender
 NSci 325. Perspectives on Gender
 SSci 325. Perspectives on Gender

D. Social and Behavioral Sciences Breadth Area (20 units)**1. American History and Civilization***Four units chosen from:*

- Hist 146. American Civilization (4)
 Hist 200. United States History to 1877 (4)
 Hist 201. United States History, 1877 to Present (4)

2. American Institutions

PSci 203. American Government (4)

Note: The American history, constitution, state and local government requirement may be met by taking:

PSci 203. American Government
and one of the following:

- Hist 146. American Civilization
 Hist 200. United States History to 1877
 Hist 201. United States History, 1877 to Present

If this requirement is met by examination, then students still must take 16 units of lower-division units in this breadth area.

3. World Cultures*Four units chosen from:*

- Anth 140. World Civilizations I, the Rise of Civilization (4)
 Hist 140. World Civilizations I, the Rise of Civilization (4)
 Hist 142. World Civilizations II, the Civilizations of the East and West (4)
 Hist 144. World Civilizations III, the Expansion of Europe (4)
 SSci 165. Regions and Peoples of the World (4)

4. Discipline Perspectives

Four units chosen from:

- Anth 100. Introduction to Anthropology: Human Evolution (4)
 Anth 102. Introduction to Anthropology: Culture and Society (4)
 Econ 104. Economics of Social Issues (4)
 ES 100. Ethnicity and Race in America (4)
 Geog 100. Introduction to Human Geography (4)
 PSci 100. Introduction to Political Science (4)
 Psyc 100. Introduction to Psychology (4)
 Soc 100. The Study of Society (4)

5. Integrative Capstone in the Social and Behavioral Sciences

Four units chosen from:

- SSci 300. Nonwestern World (4)
 SSci 304. Contemporary Latin America (4)
 SSci 315. Cultural Adaptation: The Quest for Survival (4)
 SSci 316. Race and Racism (*also counts in category H1*) (4)
 SSci 320. Understanding Capitalism (4)
 SSci 321. Urbanization and the Urban Environment (4)
 SSci 325. Perspectives on Gender (*also counts in category H1*) (4)
 SSci 343. Understanding Socialism (4)
 SSci 345. Religious Expression in America (4)
 SSci 350. Roots of Modern Racism in America (*also counts in category H1*) (4)

Note: Students may receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender
 NSci 325. Perspectives on Gender
 SSci 325. Perspectives on Gender

E. Lifelong Understanding Category (6 units)

1. The Whole Person - Physical and Physiological Issues

Two units chosen from:

- NSci 110. Health and Self Care (2)
 PE 205. Foundations for Lifetime Fitness (2)

2. The Whole Person - Social and Psychological Issues

Two units chosen from:

- Psyc 115. Personal and Social Adjustment (2)
 Soc 110. Choices in the Life Course (2)

3. Physical Education

Two units chosen from:

- PE 101. Individual and Dual Activities (2)
 PE 114. Physical Fitness and Conditioning Activities (2)
 PE 117. Combative Activities (2)
 PE 121. Team Activities (2)
 PE 137. Aquatic Activities (2)
 PE 141. Dance Activities (2)
 PE 146. Outing Skills Activities (2)
 PE 147. A Fitness Odyssey (2)
 PE 148. Leisure Sports (2)
 PE 149. Independent Activity Project (2)

Note: All students are required to complete two units of physical education in this category. Ten additional units of physical education activity

courses (numbered 150 and below) for a total of 12 units maximum may be applied toward graduation.

F. Upper-division Writing Requirement (0-4 units)

This requirement can be met by completing one of the following two options:

1. Successfully completing one of the following upper-division expository writing courses:

- Educ 495. Expository Writing for Education (4)
 Eng 495. Expository Writing (4)
 Hum 495. Expository Writing for the Humanities (4)
 Mgmt 495. Expository Writing for Administration (4)
 NSci 495. Expository Writing for the Natural Sciences (4)
 SSci 495. Expository Writing for the Social Sciences (4)

2. Passing a proficiency examination. Students passing the proficiency examination will still be required to take four units of upper-division general education course work from among those courses listed in the Elective Options Category H.

G. Multicultural/Gender Requirement Category

1. *All students must take one upper division course designated as meeting this requirement.* A student may select either an appropriate integrative capstone course (thus meeting both the multicultural/gender requirement and an integrative capstone requirement in one breadth area) or an upper division elective course in the Elective Options Category H1 approved for this requirement.

H. Elective Options Category (4-8 units)

A minimum of four elective units must be taken here from one of the two groups (1 or 2) below. As noted in category F above, students passing the proficiency examination for the upper-division writing requirement must take four units of upper-division general education in this category in addition to the minimum four elective units. Thus, this category may be four or eight units for students, depending upon whether they take the proficiency examination.

1. The multicultural/gender requirement can be met by completing one of the following two options:

a. Integrative capstone course in one of the three breadth areas (categories B5, C5 or D5)

- Hum 325. Perspectives on Gender (4)
 Hum 335. The Origin and Contemporary Role of Latino Culture (4)
 NSci 325. Perspectives on Gender (4)
 SSci 316. Race and Racism (4)
 SSci 325. Perspectives on Gender (4)
 SSci 350. Roots of Modern Racism in America (4)

b. One upper-division course from the following:

- Anth 325. Human Variation and the Concept of Race (4)
 Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 Comm 304. Intercultural Communication (4)
 Comm 401. Gender, Race and the Mass Media (4)
 CJus 451. Women and Crime (4)

Econ 352.	The Economics of Poverty and Discrimination (4)
Eng 314.	American Indian Literature (4)
Hum 460.	Cultural Studies (4)
Mus 308.	Women in Music (4)
Phil 364.	Philosophy of Race and Gender (4)
TA 462.	Afro-American Theatre and Drama (4)

2. *Complete one of the following two options:*

- a. Four units of lower-division course work from the above breadth categories B, C or D (in excess of the units required for the breadth categories);

- b. Four units of lower-division courses from the following:

Art 210A.	Western Art History: Prehistoric Times through the Middle Ages (4)
Art 210B.	Western Art History: Renaissance, Baroque and Rococo (4)
Art 210C.	Western Art History: Modern Art-1750 to the Present (4)
CSci 123.	Using Computer Software (2)
CSci 124.	Exploring the Information Superhighway (2)
CSci 127.	Introduction to Computer Technology for Educators (4)
Eng 140.	Major American Authors (4)
Mus 225.	Music in the Theatre (4)
Mus 235.	Popular Music Literature (4)
Psyc 201.	Developmental Psychology (4)
WStd 200.	Introduction to Women's Studies (4)

Graduation Requirement Check

Students must request a graduation requirement check at the Office of Admissions and Records prior to the end of the term of their expected graduation. Undergraduates should not request the check until they have accumulated 144 quarter units toward their degree, which may include work in progress. Students must pay for and file the graduation check by the deadlines established for each quarter and published in the academic calendar of the catalog and in the *Class Schedule*.

Students who do not complete the requirements in the terms for which the first graduation check was filed must refile and pay for a second graduation check indicating the quarter in which graduation is expected. Access to registration for terms subsequent to the stated graduation term will not be granted unless a graduation check is refiled for a later term or a graduate/postbaccalaureate application is submitted for readmission.

Upper-Division Writing Requirement

All students subject to degree requirements of the 1980-81 or subsequent *University Catalogs* must complete an upper-division writing competency requirement as a condi-

tion of graduation through either of two means:

1. Completion with a grade of "C" (2.0) or better of one of the following courses: Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495 or Social Sciences 495. Prerequisites for 495 courses are: English 101 and a minimum of 90 quarter (60 semester) units of college credits.

or

2. Satisfactory completion of a designated examination.

Students passing the proficiency examination will still be required to take four units of upper-division general education course work from among those courses listed in the electives options category.

Students normally shall complete the upper-division writing requirement by the end of the junior year.

Further information about the examination (for example, how much it costs, when it is offered, what it covers) is available from the Testing Center, Jack Brown Hall, Room 105, (880-5041). Contact the Office of the Dean of Undergraduate Studies, University Hall, Room 368, (880-5032) for questions about the upper-division writing requirement itself.

History, Constitution, Government Requirement

Each student must demonstrate competence in understanding the Constitution of the United States; American history, institutions and ideals; and the principles of state and local government as established in California.

The requirement in the U.S. Constitution may be met by completing one of the following: History 146, 200 and 201, or 540, Political Science 203, 410 or 411.

The requirement in U.S. history may be met by completing one of the following: History 146, 200, 201, 540, Political Science 314.

The requirement in state and local government as established in California may be met by completing one of the following: History 370 or Political Science 203 or 330.

Note: History 540 and Political Science 314 cannot be used to meet the General Education (D.1)

American History and Civilization requirement.

Students should note that General Education credit is granted for History 146, 200, 201 and Political Science 203 only.

A student can meet the entire U.S. Constitution, U.S. history, and state and local government requirement, while fulfilling general education requirements, by taking Political Science 203 and one of the following: History 146, 200 and 201 or 540. The opportunity to meet the requirements by passing an optional examination, which may be repeated once (not in the same quarter), is given to students. However, if this requirement is met by examination, students must still complete 16 lower-division units in the social and behavioral sciences breadth area. Information may be obtained from either the Office of Admissions and Records or the School of Social and Behavioral Sciences Office. The examinations are administered through the Testing Office.

Systemwide Tests Required of Most New Students

The CSU requires new students to be tested in English and mathematics after they are admitted. These are not admission tests, but a way to determine whether students are prepared for college work and, if not, to counsel them on how to strengthen their preparation. Students might be exempted from one or both of the tests if they have scored well on other specified tests or completed appropriate courses.

English Placement Test (EPT)—The CSU English Placement Test must be completed by all new non-exempt undergraduates prior to placement in appropriate university English coursework. Exemptions from the test are given only to those who present proof of one of the following:

- A score of 3, 4, or 5 on either the language and composition or the composition and literature examination of the College Board Advanced Placement Program.
- A score on the CSU English Equivalency Examination that qualifies the student for "Pass for Credit" or "Exemption."
- A score of 470 or above on the verbal section of the College Board Scholastic Aptitude Test (SAT) taken prior to March 1994.
- A score of 470 or above on the verbal section of the College Board SAT I Reasoning Test taken by March 1995. Beginning April 1995, a score of 550 will be required.
- A score of 22 or above on the ACT English Usage Test taken prior to October 1989.
- A score of 25 or above on the enhanced ACT English Test taken October 1989 or later.
- A score of 600 or above on the College Board Achievement Test* in English composition with essay taken prior to January 1994.
- A score of 600 or above on the College Board SAT II Writing Test taken by March 1995. Beginning April 1995, a score of 660 will be required.
- A score of 550 or above on the Verbal section of the College Board SAT I* Reasoning Test taken on or after April 1, 1995. (See note below.)
- A score of 660 or above on the college Board SAT II* Writing Test taken on or after April 1, 1995. (See note below.)
- For transfer students, completion and transfer to the CSU of a college course that satisfies the General Education Breadth requirement or the Intersegmental General Education Transfer Curriculum requirement in English composition, provided such a course was completed with a grade of "C" (2.0) or better.

The score obtained on the EPT will determine the appropriate level English composition course for each student. Prebaccalaureate course work may be required in preparation for the freshman composition course.

EPT scores and required course placement:

- EPT essay score of seven and EPT total score of 150 or greater, students must enroll in English 101.
- EPT total score in range from 142 to 149 (regardless of EPT Essay score), students must enroll in English 95.

- EPT total score in range from 0 to 141 (regardless of EPT essay score or units earned), students must enroll in English 85.

Students not exempt from the EPT must score 150 or greater on EPT, or complete English 95 at CSUSB with a grade of "C" or better, or complete English 85 with a "Cr" before enrolling in Freshman Composition (English 101).

Note: Undergraduates who are admitted with 56 or more transferable semester units and are subject to a campus catalog or bulletin earlier than 1986-87 are not required to complete the EPT.

Entry Level Mathematics (ELM) Exam—The ELM examination tests for entry-level mathematics skills acquired through three years of rigorous college preparatory mathematics coursework (normally Algebra I, Algebra II, and Geometry). All new undergraduate students must take the test or be exempted from it prior to placement in appropriate university mathematics coursework. Specific policies regarding retesting and placement will be determined by the campus. Exemptions from the test are given only to those students who can present proof of one of the following:

- A score of 3 or above on the College Board Advanced Placement mathematics examination (AB or BC).
- A score of 560 or above on the mathematics section of the College Board Scholastic Aptitude Test taken prior to March 1994.
- A score of 560 or above on the on the mathematics section of the College Board SAT I Reasoning Test OR on the College Board SAT II Mathematics Tests Level I, II, or IIC (Calculator) beginning March 1994.
- A score of 24 or above on the American College Testing Mathematics Test taken prior to October 1989.
- A score of 25 or above on the enhanced ACT Mathematics Test taken October 1989 or later.
- A score of 560 or above on the College Board Mathematics Achievement Test*, Level I or Level II taken prior to March 1994.
- For transfer students, completion and transfer to the CSU of a college course that satisfies the General Education-Breadth requirement or the Intersegmental General Educational Transfer Curriculum requirement in Quantitative Reasoning, provided such course was completed with a grade of "C" or better.

ELM scores and required course placement:

- ELM score of 550 or greater, students may enroll in any General Education mathematics course.
- ELM score of 480 to 540, students must enroll in Mathematics 90.
- ELM score of 350 to 470, students must enroll in Mathematics 80.
- ELM score of below 350, students must enroll in Mathematics 75.

* The College Board SAT and Achievement Tests were replaced by SAT I and SAT II, respectively, beginning March 1994. In the Spring of 1995, the CSU will publish new exemption score requirements for SAT I/II taken after March 1995; however, the SAT scores qualifying for exemption from the ELM remain the same.

Students not exempt from the ELM must score 550 or greater on the ELM or complete Mathematics 90 at CSUSB with a grade of "C" or better before enrolling in any General Education mathematics course.

Failure to take either of these tests, as required, within the first quarter of attendance will result in blocked registration for subsequent quarters and may lead to administrative probation, which according to Section 41300.1 of Title 5, California Code of Regulations, and CSU Executive Order 393 may lead to disqualification from future attendance.

Information bulletins and registration materials for the EPT and ELM will be mailed to all students subject to the requirements. The materials may also be obtained from the Office of Admissions and Records or the campus Test Office.

Assistance in understanding EPT and ELM test scores and requirements is available at Advising and Academic Services (University Hall, Room 380, 880-5035). Students who do not pass the EPT and/or ELM will be required to take appropriate prerequisite course(s) at CSUSB. Transfer courses are not accepted to meet these prerequisite requirements.

Second Bachelor's Degree Requirements

A student who holds a bachelor's degree from California State University, San Bernardino or another accredited institution and who applies for a second degree must have satisfactorily completed each of the following in order to receive a second bachelor's degree in a different major:

1. General education requirements as stated in the appropriate catalog;
2. Upper-division writing requirement;
3. Requirements of the major involved;
4. In addition to whatever work was presented for the first bachelor's degree, a minimum of 45 quarter units of residence work of which
 - a. 18 units must be in the second major,
 - b. 12 units must be in general education,
 - c. 36 units must be at the upper-division level;
5. Maintain a 2.5 GPA in all work attempted; and
6. Approval of the faculty of the university.

It is not necessary to complete a second bachelor's degree in order to graduate with a dual major; however, only a single diploma is issued in the case of a dual major. Contact the Office of Admissions and Records. Refer to Page 44 for further information about duplicate degree tuition.

Multiple Majors/Concentration

A student will normally meet graduation requirements for a degree in one of the major curricula. A student may be granted a bachelor's degree with two or more major/concentrations if the complete requirements of all curricula are satisfied at the same time. However, only one diploma will be granted to the student at the point of graduation. In the event that a student has completed the requirements for two different degrees, such as a B.A. and a B.S., the student will be required to declare one major as the degree major in order to determine which degree will be awarded. The fact

that the requirements of other programs have been completed will be noted on the transcript.

University Residence Requirement for Graduation

A minimum of 45 quarter units must be completed at this university. At least 36 of these units must be upper-division, 18 in the major and 12 in general education.

Extension credit, credit by examination or credit by evaluation may not be used to fulfill the minimum residence requirement.

University Honors

University Honors at Commencement. To be considered for University Honors at commencement, an undergraduate student must have completed a minimum of 45 units of work at California State University, San Bernardino in courses for which letter grades (A, B, C and D) were received.

- *Highest Honors:* an overall undergraduate GPA of 3.9 or above and a GPA of 3.9 or above in all work attempted at this university.
- *High Honors:* an overall undergraduate GPA of 3.75 or above and a GPA of 3.75 or above in all work attempted at this university.
- *Honors:* an overall undergraduate GPA of 3.5 or above and a GPA of 3.5 or above in all work attempted at this university.

Dean's List. An undergraduate student completing 12 or more units for which letter grades (A, B, C and D) were received, and who earns a 3.5 or above in any regular academic term will be placed on a Dean's List.

- *Dean's Letter of Recognition.* Any full-time undergraduate student, meeting the above requirements, who earns a 4.0 in any regular academic term will receive a letter of special recognition from the appropriate dean.
- *Presidential Letter of Recognition.* Any full-time undergraduate student, meeting the above requirements, who earns a 4.0 in three consecutive regular academic terms will receive a letter of special recognition from the president of the university.

Departmental Honors. Individual departments may award departmental honors at graduation, recognizing distinguished students majoring in that field. The requirements to be met to earn honors are specified by the respective departments. Departmental honors are currently awarded in accounting and finance, anthropology, biology, chemistry, communication, computer science, criminal justice, economics, environmental studies, health science, history, human services, information and decision sciences, management, marketing, mathematics, music, nursing, philosophy, physical education, political science, psychology, public administration and sociology.

Commencement

Participation in commencement activities is voluntary. December 1995, March 1996 and prospective June, September and December 1996 graduates are eligible to participate in the June 1996 commencement exercises. In order to get commencement information to all eligible students, the

deadline to file a graduation check and be included in the commencement program is the last working day in April. Students who file a graduation check in May or June may still participate in commencement, but will not have their names included in the commencement program. Appropriate information will be sent to these students in May 1996. Graduates and candidates wishing to participate in the commencement ceremony will be required to pay a commencement fee. Questions regarding commencement should be directed to the Commencement Hotline, 880-7050.

Minors

Minors can only be granted for the same term in which the student graduates with an undergraduate degree. The requirements for minors are listed under appropriate majors in the catalog.

Preparation for Professional Schools

The plan of undergraduate study at the California State University, San Bernardino emphasizes a liberal education in preparing for professional or vocational specialization.

Some professions, such as law, stress that candidates for admission to professional schools can best prepare themselves during college by acquiring several fundamental skills. Others, for example, medicine and dentistry, emphasize certain subject matters. A student preparing for either kind of emphasis (skills or specific subjects) has opportunities to do so by selecting, in consultation with an appropriate preprofessional advisor, the kind of curriculum that most soundly meets the standards set by the profession he or she wishes to enter.

Preprofessional Programs: Medicine, Veterinary Medicine, Dentistry, Pharmacy

The majority of students entering medical and dental schools in the United States do so after having acquired a B.A. or B.S. degree at an undergraduate college. Possession of an undergraduate degree is especially worthwhile, since professional schools do not offer liberal arts subjects.

Any undergraduate major is appropriate for a preprofessional student as long as certain basic subject areas are included in the program. For specific requirements of professional schools, the student is urged to consult special sources such as "Medical School Admission Requirements" (a publication of the Association of American Medical Colleges) or a preprofessional advisor in the School of Natural Sciences.

In general, medical and dental schools recommend that the undergraduate degree program include: one year of general chemistry, one year of organic chemistry, one year of general biology, with additional course work in developmental biology and/or comparative anatomy and genetics, and one year of physics. Other courses, e.g., mathematics through calculus and physical chemistry, are often recommended as well.

Since preprofessional programs in dentistry and medicine place heavy emphasis on biology and chemistry, these are the two majors most often elected by preprofessional students. A preprofessional student majoring in biology should complete the biology core program, supported by courses in chemistry and physics, and should elect Mathematics 211 and Biology 342. A preprofessional student majoring in chemistry should complete the chemistry core program, supported by courses in mathematics and physics, and should elect Biology 342 and 440.

The science and mathematics components of preprofessional programs in veterinary medicine are quite similar to those for medicine.

Admission to a school of pharmacy can also be gained after two years of undergraduate work. Although entrance requirements vary somewhat, they generally include full-year introductory courses in biology, chemistry, mathematics and physics. A course in organic chemistry is sometimes required as well.

Pre-engineering Program

Most students earn engineering degrees by attending a university with an accredited program in engineering. Although there are many different engineering disciplines, the first two years of course work is quite similar for most of these fields.

The pre-engineering courses offered allow the student to complete the first two years of courses generic to engineering. The student may then transfer to an accredited engineering program of their choice.

The advantages to students who enter the pre-engineering program are many. Most engineering schools are very competitive and not all qualified students can be accepted as freshmen. However, it is much easier for a student to qualify as a transfer student. Students with math course deficiencies can enter the pre-engineering program and complete their course work at their own pace. Classes here have smaller enrollments than in large engineering schools and provide students with greater opportunities to interact with the faculty.

The physics faculty, working as pre-engineering advisors, help the student design a course of study specific to the engineering field of interest and to the program to which the student will transfer. For detailed course information, refer to the courses listed under the Department of Physics.

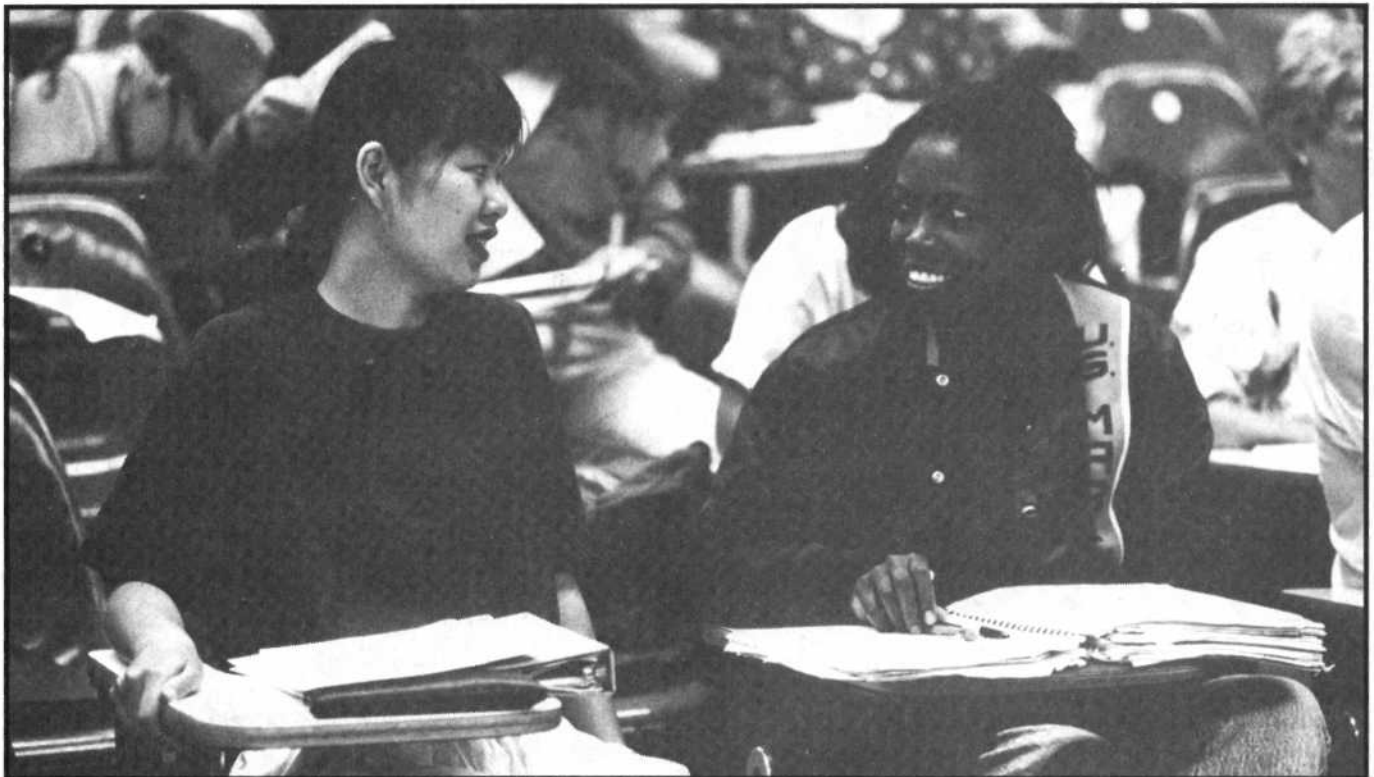
Preprofessional Program: Law

Applicants for admission to most law schools are expected to have a B.A. or B.S. degree and to have taken the Law School Admission Test. There is no single "prelaw" major required since the successful study of law is more often related to the ability to grasp and solve difficult intellectual problems and to employ disciplined work habits, than it is to any narrow, specialized field of study. However, students headed for law school are well advised to take a small number of selected liberal arts courses in subjects relevant to the law. Accordingly, the college offers a pre-law minor consisting of such courses. For further information concerning the prelaw minor, see Page 273.

Several broad objectives of prelegal education are set forth by the Association of American Law Schools. These include the oral and written command of language; an understanding and appreciation of social, political and economic values, institutions, problems and frames of reference; and an ability for creative, innovative, critical and analytical thinking.

For these reasons, every prelaw student should carefully choose, with the aid of appropriate advisors, courses which sharpen the skills and sensitivities previously listed. Since no one major is mandatory, the student should select one which emphasizes the areas mentioned above (administration, economics, English, history, philosophy, political science and sociology, to name a few). For additional information, the student should consult with the prelaw advisor and should be familiar with the Prelaw Handbook.

For additional information, a student should see the bulletins or catalogs of various law schools or the official Prelaw Handbook, current edition, prepared by the Law School Admission Test Council and the Association of American Law Schools. This handbook may be obtained at most college bookstores or ordered from Educational Testing Services, Princeton, N.J. 08540.



Certificate Programs

The university offers a variety of programs leading to a certificate of competency in special areas.

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies, or (b) produce mastery of the content of a sub-field of an academic major (discipline), or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field.

Courses offered for the certificate may be the same ones used to satisfy major, minor, credential or general education requirements. In order to qualify for a certificate, undergraduate candidates must earn a grade-point average of 2.0 ("C") or better in applicable course work. Postbaccalaureate candidates must earn a grade-point average of 2.5. Standards for individual programs may exceed this minimum. Candidates must also receive two-thirds of their certificate-applicable credit from the university. The transferring of credit or the substitution of courses may occur only after application to the appropriate campus authority.

The certificate is awarded upon confirmation that the requirements for that program have been satisfied. The candidate is responsible for filing an application with the Office of Admissions and Records for granting of the certificate, no later than the last term of certificate-applicable study, and for notifying the coordinator of the certificate program of completion of required course work. The awarding of a certificate will be noted on the student's transcript.

Further information regarding the certificates offered by the university can be found under the appropriate department.

Certificate Programs Offered

Accounting

Department of Accounting and Finance, Jack Brown Hall, Room 459, 880-5704. Refer to Page 81.

Bilingual/Cross-Cultural Studies: Spanish/English

Department of Foreign Languages, University Hall, Room 314, 880-5847. Refer to Page 298.

Business Skills for the Artist

Department of Art, Visual Arts Building, Room 123B, 880-5802. Refer to Page 101.

Children's Theatre

Department of Theatre Arts, Creative Arts Building, Room 111, 880-5876. Refer to Page 305.

Coaching

Department of Physical Education, Health and Physical Education Building, Room 120, 880-5349. Refer to Page 263.

Communication Skills

Department of Communication Studies, University Hall, Room 201.14, 880-5815. Refer to Page 119.

Community College Counseling

Department of Advanced Studies in Education, Faculty Office Building, Room 126, 880-5606. Refer to Page 371.

Community Mental Health

Department of Health Science and Human Ecology,
Health and Physical Education Building, Room 235,
880-5339. Refer to Page 188.

Computer Systems and Programming

Department of Computer Science, Jack Brown Hall,
Room 307, 880-5326. Refer to Page 124.

Criminal Justice

Department of Criminal Justice, Faculty Office Building,
Room 144, 880-5506. Refer to Page 129.

Education of the Gifted and Talented

Department of Advanced Studies in Education, Faculty
Office Building, Room 126, 880-5603. Refer to
Page 371.

Educational Computing

Department of Secondary and Vocational Education,
Faculty Office Building, Room 139, 880-5650. Refer to
Page 371.

Educational Technology

Department of Secondary and Vocational Education,
Faculty Office Building, Room 139, 880-5650. Refer to
Page 372.

Environmental Education

Department of Advanced Studies in Education, Pfau
Library Building, Room 279, 880-5640. Refer to
Page 372.

Fitness Management

Department of Physical Education, Health and Physical
Education Building, Room 120, 880-5349. Refer to
Page 263.

French/English and English/French Translators

Department of Foreign Languages, University Hall,
Room 314, 880-5824. Refer to Page 175.

German/English Translators

Department of Foreign Languages, University Hall,
Room 314, 880-5847. Refer to Page 184.

Gerontology (Applied)

Department of Sociology, Faculty Office Building,
Room 144, 880-5541. Refer to Page 292.

International Relations

Department of Political Science, Faculty Office
Building, Room 146, 880-5532. Refer to Page 273.

Language Development Specialist

Department of Elementary and Bilingual Education,
Faculty Office Building, Room 125, 880-5603. Refer to
Page 372.

Latin American Studies

Department of Anthropology, Faculty Office Building,
Room 249, 880-5502. Refer to Page 93.

Middle Grade Education

Department of Secondary and Vocational Education,
Faculty Office Building, Room 139, 880-5650. Refer to
Page 372.

Military Science, Army ROTC

Office of Military Science, Health and Physical
Education Building, Room 114, 880-5533. Refer to
Page 237.

Museum Studies

Department of Anthropology, Faculty Office Building,
Room 249, 880-5502. Refer to Page 93.

Paralegal Studies

Coordinator's Office, Faculty Office Building,
Room 249, 880-5548. Refer to Page 254.

Reading/Language Arts for the Classroom Teacher

Department of Elementary and Bilingual Education,
Faculty Office Building, Room 125, 880-5603. Refer to
Page 373.

Recreation Leadership

Department of Physical Education, Health and Physical
Education Building, Room 120, 880-5349. Refer to
Page 263.

Rehabilitation Counseling

Department of Advanced Studies in Education, Faculty
Office Building, Room 126, 880-5606. Refer to
Page 362.

Remedial Education in the Elementary School

Department of Elementary and Bilingual Education,
Faculty Office Building, Room 125, 880-5603. Refer to
Page 373.

Resource Specialist in Special Education

Department of Advanced Studies in Education, Faculty
Office Building, Room 126, 880-5606. Refer to
Page 374.

School Business Management

Department of Advanced Studies in Education, Faculty
Office Building, Room 126, 880-5606. Refer to
Page 373.

Social Work

Department of Sociology, Faculty Office Building, Room
123, 880-5541. Refer to Page 290.

Spanish for Public Services

Department of Foreign Languages, University Hall,
Room 314, 880-5847. Refer to Page 298.

Study Strategy Instruction for the Secondary School

Department of Secondary and Vocational Education,
Faculty Office Building, Room 139, 880-5650. Refer to
Page 374.

Teaching Basic Mathematics

Department of Mathematics, Jack Brown Hall, Room
380, 880-5361. Refer to Page 231.

Urban Planning

Department of Geography, Faculty Office Building,
Room 249, 880-5519. Refer to Page 178.

Women's Studies

School of Social and Behavioral Sciences, Faculty Office
Building, Room 104, 880-5516. Refer to Page 314.

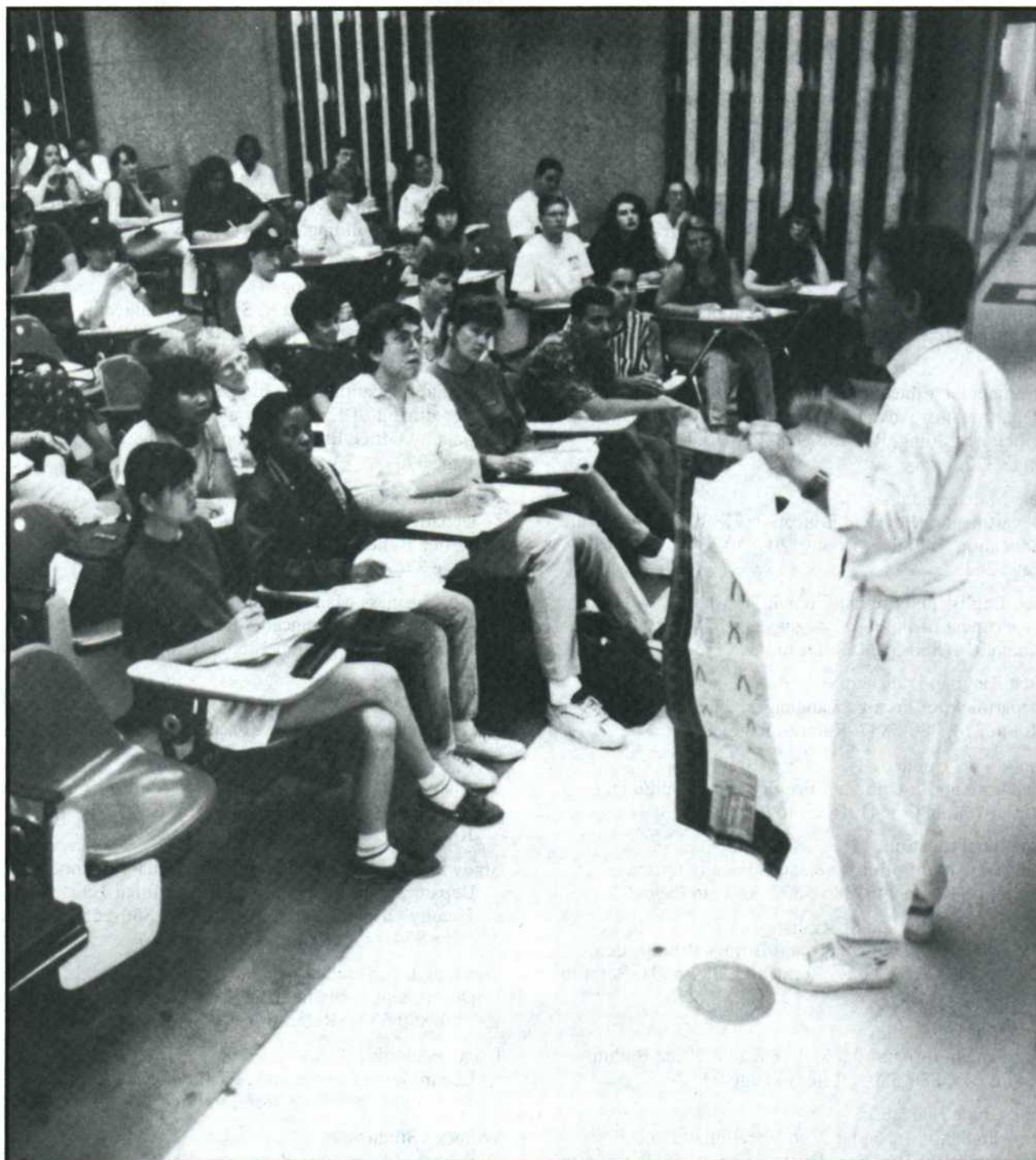
68 / Certificate Programs

Writing: Creative Writing

Department of English, University Hall, Room 334,
880-5824. Refer to Page 162.

Writing: Professional Writing

Department of English, University Hall, Room 334,
880-5824. Refer to Page 162.



Extended Education

Extended Education at California State University, San Bernardino is the university's avenue for residents of the Inland Empire to enhance their education. The Office of Extended Education offers a variety of programs and services to extend the resources of the university to the community. These resources include faculty and staff, degree applicable credit, noncredit offerings and facilities.

The California State University regards its extended education credit-bearing programs as integral parts of the institution. These programs are viewed as extensions of the university's educational services and are in concert with its overall mission and purpose. The programs and courses in extended education are expected to meet the standards of quality which the institution sets for its other programs and courses, in terms of resources, faculty, level of instruction, evaluation and support services.

Extension

A variety of credit and noncredit extension courses are offered to meet the lifelong educational needs of residents in the Inland Empire. Taught by university faculty and academically qualified practitioners, many of these courses provide professional development in business, management, education, health care and other fields, with the aim of improving one's effectiveness on the job or opening doors to new careers.

The 1000-level education courses offered through Extended Education are designed with professional growth in mind and, in most cases, apply toward the requirements of SB813 and salary advancement for teachers.

The Office of Extended Education offers a variety of certificate programs that can help participants gain a competitive edge for upward mobility in their workplace. Excellent instructors are drawn from the university, educational community, business and industry. Current certificate programs include: Certificate in Management Skills, Certificate in MS DOS Computers for Business Professionals, Certificate in Mortgage Banking, Total Quality Management Certificate, Women in Management Certificate, Certificate in Computer-Aided Drafting and Design and School Business Management Certificate.

Many extension courses are offered off campus including an array of courses at the Desert Studies Center near Baker, California. In outdoor classrooms, students can explore the life-ways of early man, archaeology, geology, flora and fauna, art and much more.

Extended Education also offers a variety of personal enrichment courses, in areas such as writing, recreation, real estate and computers. For more information, call 880-5975.

Conferences

The Office of Extended Education's conference services division is recognized as the campus vehicle for providing conference support for educational institutions, professional organizations, business and industry.

Depending upon the scope and content of the particular conference, the Office of Extended Education may be able to provide co-sponsorship, arrange for meeting and meal facilities, locate keynote speakers and other program presenters, provide registration support, certificates of completion and, in many cases, professional advancement extended education credit.

The campus is conducive to supporting groups up to 400, providing ample meeting space and a picturesque setting in the foothills of the San Bernardino mountains. The Office of Extended Education also can make conference arrangements off campus, including Palm Springs. For more information, call 880-5977.

Professional Development Contract Programs

Utilizing the up-to-date resources of California State University, San Bernardino, the Office of Extended Education provides consulting services, training development programs, certificate programs, conferences, educational components for grants, and needs assessment for business (large and small), industry, hospital and health care organizations, and government agencies.

In direct consultation with the participating organization, the Office of Extended Education will develop custom-designed professional development seminars or programs to accelerate the professional effectiveness, productivity and problem-solving skills of the organization's staff. For more information, call 880-5976.

Teacher Inservice Programs

Schools or districts interested in planning a special course or program may contact the Office of Extended Education for assistance. Extended Education is prepared to aid in the professional development and personal growth of school staff by providing professional advancement credit (assuming the inservice program meets the academic criteria set forth by CSUSB, participants may earn professional advancement, non-degree applicable credit toward salary increases); and university resources, including CSUSB faculty and facilities. For more information, call 880-5976.

Summer Session

Summer Session affords both regular and nonmatriculated students the opportunity to pursue undergraduate or graduate study in virtually all of the university's academic majors and in professional programs.

There is no prior application required nor are there formal procedures for admission to Summer Session. Course credits earned in the summer denote residence credit and are accepted toward degree programs on campus when students matriculate to the university. For more information, call 880-5975.

Off-Campus Programs

As part of its commitment to the university's goal of regional service, the Office of Extended Education may offer self-supported Off-Campus Programs at a variety of off-campus locations. For more information, call 880-5976.

Open University

Most courses listed in the university catalog are open to nonmatriculated students through Extended Education under a program called Open University. Members of the community who meet the prerequisites may enroll in regular campus courses on a space-available basis. Students can apply up to a maximum of 36 units through Open University toward a bachelor's degree and 13 units toward a master's degree (subject to approval by department concerned).

Open University is designed for those who:

- missed the deadline for admission to the regular resident program;
- want to examine a particular field before actually enrolling in a degree program;
- want to update professional training;
- are considering reentering an academic program; or
- want to take courses not offered through the extended education program.

Students who desire to enroll in Open University classes are required to secure a permit from the Office of Extended Education and obtain approval of the instructor. Currently matriculated students are not allowed to enroll concurrently in the Open University program. Open University deadlines are posted quarterly in the Extended Education *Bulletin*. For more information, call 880-5975.

American Culture and Language Program

ACLP is designed for international students, visitors and professionals who seek an intensive English experience focusing on reading, writing and speaking English, and an introduction to American culture.

The American Culture and Language Program provides students with:

- intensive study of the English language at beginning, intermediate and advanced levels;
- an introduction to American culture and life-styles through a variety of educational and fun field trips;
- lodging either at CSUSB residence halls or with homestay families;
- necessary preparation for university-level course work;
- T.O.E.F.L. preparation;
- academic counseling;
- I-20 form for student visas.

The American Culture and Language Program offers a ten week program each quarter, and specially designed intensive five week programs for smaller groups. Many ACLP students eventually matriculate to California State University, San Bernardino. For more information, call 880-5978.

The Curriculum

Schools of the University

The academic program of the university is offered through five schools—Business and Public Administration, Education, Humanities, Natural Sciences and Social and Behavioral Sciences—organized into departments.

Degree programs are offered by departments, schools and interdisciplinary committees. A complete listing of the degrees available at the university may be found on Page 18.

Course Numbering System

1-99	<i>Nondegree-applicable credit.</i>
100-299	Lower-division courses designed primarily for freshmen and sophomores. <i>Graduate credit is not allowed.</i>
300-599	Upper-division courses of junior and senior level; graduate credit may be awarded if course is accepted in a specific graduate program.
600-699	Courses for postbaccalaureate and graduate students only. <i>May not be taken by undergraduates.</i>
X1000-X9999	Courses offered through extension only. <i>Credit not degree applicable.</i>
IP100-IP699	Courses taken by students in the International Programs.
e300-e699	Credit earned in a continuing education program for residence credit pursuant to an external degree program.

Full-Term Course Credits

Most courses at California State University, San Bernardino carry four quarter units of credit; some carry six units; some two units; and a few variable credit. Course credits are indicated in the course descriptions in this catalog. Since each unit of credit presumes one hour of class time and two hours of preparation, a typical four-unit course would require a minimum of 12 hours per week of the student's time. For purposes of comparison with other colleges, a four quarter-hour course is equivalent to a 2.66 semester-hour course.

Every effort has been made to assure the accuracy of the information in this catalog. Students are advised, however, that such information is subject to change without notice. Therefore, they should consult the appropriate instructional departments, schools, or administrative offices for current information. (Also see Changes in Rules and Policies statement on Page 441.) The *Class Schedule*, issued prior to each quarter, lists courses to be offered during that term.

The Schools and Departments of the University

School of Business and Public Administration

Dean	Eldon Lewis, Interim
Chairs:	
Accounting and Finance	Linvol Henry
Information and Decision Sciences	C.E. Tapie Rohm
Management	James Rogers
Marketing	Nabil Razzouk
Public Administration	Clifford Young

School of Education

Dean	Phyllis Fernlund (Acting)
Chairs:	
Advanced Studies in Education	William Camp
Elementary and Bilingual Education	Billie Blair
Secondary and Vocational Education	Alvin Wolf (Acting)

School of Humanities

Dean	Beverly L. Hendricks
Chairs:	
Art	Richard Johnston
Communication Studies	A. Craig Monroe
English	Loralee MacPike (Acting)
Foreign Languages	Jacques Benzakein
Music	Loren Filbeck
Philosophy	Susan Finsen
Theatre Arts	Patrick Watkins

School of Natural Sciences

Dean	Klaus Brasch (Acting)
Chairs:	
Biology	Richard Fehn (Acting)
Chemistry	John Craig
Computer Science	Owen Murphy
Geological Sciences	James Mehegan
Health Science and Human Ecology	Richard Eberst
Mathematics	Paul Vicknair
Nursing	Elizabeth Barfield
Physical Education	Chris Grenfell
Physics	Leo Connolly

School of Social and Behavioral Sciences

Dean	Ellen Gruenbaum (Acting)
Chairs:	
Anthropology	Russell Barber
Criminal Justice	Charles Fields
Economics	Mayo Toruno
Geography	Theodore McDowell
History	Lanny Fields
Political Science	Michael LeMay
Psychology	Charles Hoffman
Social Work	Rosemary McCaslin
Sociology	David Decker

ACCOUNTING

Department of Accounting and Finance

Jack Brown Hall, Room 459
880-5704

FACULTY: Frank Bensen, Cynthia Bird, Otto Chang, John Dorocak, Linvol Henry (Chair), Sung-Kyoo Huh, Barry Knight, Eldon Lewis, Claire Purvis, Christine Schalow, John Scribner, Hossein Shalchi, Mike Trubnick, Curtis Westbrook

The university offers concentrations in accounting within the Bachelor of Science in Administration and the Master of Business Administration. A Certificate in Accounting is also available. The details of these programs are listed under Administration on Page 75. The Master of Business Administration can be found on Page 330. The courses listed below are offered in support of these programs. Further information is available from the Department of Accounting and Finance.

COURSE OFFERINGS IN ACCOUNTING (Acct)

Lower Division

211. Principles of Accounting I

Fundamentals of recording, analyzing, and communicating financial information including income determination, assets and liability relationships and preparation of financial statements. A self-paced version of this course (Accounting 211S) is also available. Students may not receive credit for more than one of the following courses: Accounting 211, 211S, (211A, 311 or 311A). (4 units)

212. Principles of Accounting II

Continuation of Principles of Accounting I with emphasis on interpretation and uses of financial data for decision-making including cost analysis, budgeting, and control. May not be taken for credit by students who have received credit for Accounting 312 or Administration 306. A self-paced version of this course (Accounting 212S) is also available. Students may not receive credit for more than one of the following courses: Accounting 212, 212S, (212A, 312 or 312A). *Prerequisite:* Accounting 211 (or 311). (4 units)

Upper Division

Enrollment in upper division courses restricted to students who have met all prerequisites and have completed at least 89.9 quarter units (junior class level). Students who do not meet these requirements will be disenrolled.

315. Accounting Information Systems

Hardware and software for use in computer-based accounting information systems. The development and design of systems

is introduced. A brief introduction to internal control and audit of computer systems and basic operating controls complete the course. Formerly Accounting 446. *Prerequisites:* Information Management 220, 309 and Accounting 212. (4 units)

344. Cost Accounting

Cost accounting concepts, objectives, and systems. *Prerequisite:* Accounting 212 (or 312.) (4 units)

345. Cost Analysis and Control

Application of cost accounting principles for decision making within the enterprise, activity based costing, profitability decisions, operations management, transfer pricing, performance evaluation, executive compensation and other topics. Formerly Accounting 545. *Prerequisite:* Accounting 344. (4 units)

372. Intermediate Accounting

In-depth study of the fundamentals of accounting and their applications to the short-term segments of the statement of financial position. Includes study of pronouncements of professional accounting organizations and the Securities and Exchange Commission. *Prerequisites:* Accounting 211 (or 311); Accounting 212 (or 312); Economics 200 and 202; English 101; Information Management 101; Management Science 210; and Mathematics 110 with a grade of "C" or better in each course. Students must provide evidence of compliance with these prerequisites to the course instructor. (4 units)

373. Problem Areas in Intermediate Accounting

Continuation of Accounting 372 with applications to the long-term segments of the statement of financial position. *Prerequisite:* Accounting 372 with a grade of "C" or better. (4 units)

374. Reporting Issues in Intermediate Accounting

Continuation of Accounting 372 and 373 with applications to financial reporting issues. *Prerequisite:* Accounting 372. (4 units)

426. Introduction to Taxation I

Introduction to the basic concepts of federal income taxation. Includes history and objectives of the tax, along with the treatment of various types of entities, types of income, types of deductions and types of credits. Emphasis is on the individual as a taxpayer. *Prerequisites:* Accounting 211 (or 311) and junior standing. (4 units)

436. Corporate and Partnership Taxation

The basic concepts of the federal income taxation of corporations and partnerships. Formerly Accounting 427 and 527. *Prerequisite:* Accounting 426 with a grade of "C" or better or consent of instructor. (4 units)

439. Advanced Accounting

Advanced topics in accounting including business combinations, multinational operations and foreign currency transactions, liquidations, and reorganizations. Includes partnership formation, income distribution and liquidation. *Prerequisite:* Accounting 373. (4 units)

440. Auditing I

Theory and function of the auditor, viewed from the perspective of public accounting. Topics will include standard audit reports, planning the audit risk assessment, auditor's legal liabilities, tests of controls, and audit evidence. Formerly Accounting 438. *Prerequisite: Accounting 374.* (4 units)

441. Auditing II

Continuation of the theory of auditing with transition to practice. Topics will include recent statements on auditing standards, case based internal control structure considerations, statistical sampling applications, computer-assisted auditing techniques, and modifications of the standard audit report. *Prerequisite: Accounting 440.* (4 units)

444. Accounting Law, Ethics and Institutions

Advanced accounting law topics, ethical standards, and institutions for professional accountants. Emphasis on legal problems encountered in the public accounting profession, including an examination of the ethical standards and the political and regulatory institutions that affect the practice of public accounting. *Prerequisite: Management 330.* (4 units)

456. Estates and Gifts and other Specialized Taxation Topics

Taxation topics not covered in depth in Accounting 426 and 436, including gift and estate tax, income taxation of trusts and estates, tax administration and practice, working with tax law, advanced individual income tax topics, and other special topics. *Prerequisite: Accounting 426 with a grade of "C" or better or consent of instructor.* (4 units)

503. Financial and Managerial Accounting

Intensive introduction to applied topics and techniques in financial and managerial accounting. Development and use of accounting information for external reporting purposes and management analysis, decision-making, planning and control. No credit will be awarded to students who have taken Accounting 211 and 212 (306; or 311 and 312). May not be counted toward fulfilling requirements for any degree program offered by the School of Business and Public Administration. *Prerequisite: achievement of the GMAT formula score of 1020.* (4 units)

568. Accounting for Government and Not-for-Profit Organizations

Covers principles and practices of government fund accounting. Topics include governmental accounting concepts, types and structure of funds and accounts, application of generally accepted accounting principles to government and not-for-profit entities, presentation and uses of financial statements. (Also offered as Public Administration 568. Students may not receive credit for both.) *Prerequisite: Accounting 211 or 311.* (4 units)

575. Internship in Accounting

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Accounting

An intensive study of some phase of accounting to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of project instructor and approval by the department of a written proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

ADMINISTRATION

Accredited by the American Assembly of Collegiate Schools of Business

School of Business and Public Administration

Jack Brown Hall, Room 278
880-5700

Bachelor of Arts

Administration
with concentrations in:
Business Economics
Finance
Information Management
Management
Management Science
Marketing
Production/Operations Management
Public Administration
Small Business Management

Bachelor of Science

Administration
with concentrations in:
Accounting
Finance
Information Management
International Business
Management Science
Marketing

Minor

Business Administration
Public Administration

Master of Business Administration

(Degree requirements can be found on Page 330.)

Master of Public Administration

(Degree requirements can be found on Page 411.)

Certificate Program

Accounting

The School of Business and Public Administration offers a major in administration designed to prepare students for careers in business, government service, institutions and related fields.

Within the mission of the university, the School of Business and Public Administration has three central objectives: (1) provide high quality business and public administration programs which will prepare our students for successful careers in business and government; (2) participate in scholarly activities which will assist in keeping our students, faculty, and our constituent businesses and governments abreast of current developments in their respective disciplines; and (3) provide professional service to our university, community and professional organizations. The curriculum, with its core requirements and areas of specialization, provides the student with a broad-based behavioral

and quantitative understanding of the concepts of management. The managerial function and decision-making processes are studied with coverage in methods of analysis of quantitative information; judgment and appraisal of social, economic and human relations issues; and effective communication.

Areas of commonality among various public and private systems of institutional management constitute the core material of the administration major, while variations which distinguish management practices in different functional areas are subjects for optional specialization.

Students are encouraged to check that they have met the prerequisite requirements for each course in the School of Business and Public Administration in which they are planning to enroll. Prerequisite requirements listed for each course are strictly enforced.

Enrollment in 300-, 400- and 500-level courses in the School of Business and Public Administration is restricted to students who have completed at least 89.9 quarter units (i.e., at least junior class level) and all lower-division courses listed below. Course prerequisites are strictly enforced.

Students who do not meet the stated requirements may be disenrolled from the course(s).

In addition to the grade point average requirements stated on page 57, an administration major student must earn a grade point average of 2.0 ("C") or better in all units used to fulfill the requirements of the concentration.

B.A. IN ADMINISTRATION

Requirements (92-94 units)

Requirements for the B.A. in Administration:

Lower-division requirements (32 units)

1. Acct 211. Principles of Accounting I (4)
2. Acct 212. Principles of Accounting II (4)
3. Econ 200. Principles of Microeconomics (4)
4. Econ 202. Principles of Macroeconomics (4)
5. Info 101. Introduction to Information Technology (4)
6. Mgmt 230. Business Law (4)
7. MSci 210. Applied Business Statistics (4)
8. Four units chosen from (also meets the General Education requirement category B1):
 - Math 110. College Algebra (4)
 - Math 120. Pre-Calculus Mathematics (4)
 - Math 192. Methods of Calculus (4)
 - Math 211. Basic Concepts of Calculus (4)

Upper-division core requirements (36 units)

1. Fin 313. Business Finance (4)
2. Fin 314. Corporate Financial Management (4)
3. Info 309. Information Management (4)
4. Four units chosen from:
 - Mgmt 302. Management and Organizational Behavior (4)
 - Psyc 302. Management and Organizational Behavior (4)
5. Mgmt 330. Legal Environment of Business (4)

76 / Administration

6. Mgmt 490. Administrative Strategy and Policy (4)
7. Mktg 305. Marketing Principles (4)
8. MSci 304. Principles of Production and Operations Management (4)

9. PA 315. Government-Business Relations (4)

Note: Students choosing the public administration concentration, substitute Economics 475 for Finance 313; Public Administration 472 for Finance 314; Public Administration 307 for Marketing 305 and Political Science 428 for Management 490.

Concentration (24 - 26 units)

Choose one concentration from the following:

Note: The concentration electives should be chosen from the electives listed for each concentration or, with the prior approval of the department chair, the student may substitute other courses for these electives. With prior approval, up to two of the concentration electives may be chosen from other academic disciplines. In planning their career goals, students should review course offerings of other departments to determine if specific courses fit their career plans.

Business Economics Concentration (26 units)

1. Econ 322. Managerial Economics (4)
2. Econ 335. Economic Analysis with Microcomputers (5)
3. Econ 372. Business Cycles (5)
4. *Twelve units of electives chosen from:*
 - Econ 333. Women in the Economy (4)
 - Econ 340. Advanced Economic Analysis with Microcomputers (4)
 - Econ 360. Economics of the Environment (4)
 - Econ 410. Money and Banking (4)
 - Econ 430. International Economics (4)
 - Econ 435. Multinational Corporations (4)
 - Econ 475. Public Finance (4)
 - Econ 490. Introduction to Econometrics (4)
 - Econ 575. Internship in Economics (4)
 - MSci 400. Quantitative Decision Methods (4)
 - MSci 466. Production Planning and Operations Research (4)

Finance Concentration

1. Fin 430. Financial Theory and Practice (4)
2. Fin 432. Financial Institutions and Capital Formation (4)
3. Fin 433. International Business Finance (4)
4. Fin 435. Investment Analysis (4)
5. Fin 445. Financial Analysis and Decision-Making (4)
6. *Four units of electives chosen from:*
 - Acct 372. Intermediate Accounting (4)
 - Acct 373. Problem Areas in Intermediate Accounting (4)
 - Acct 426. Introduction to Taxation I (4)
 - Acct 436. Corporate and Partnership Taxation (4)

- Econ 410. Money and Banking (4)
- Econ 475. Public Finance (4)
- Fin 360. Risk Management and Insurance (4)
- Fin 380. Principles of Real Estate (4)
- Fin 434. Export-Import Financing (4)
- Fin 575. Internship in Finance (4)
- Fin 585. Real Estate Finance (4)
- Mgmt 442. Small Business Management (4)
- MSci 360. Statistical Analysis for Management (4)
- MSci 400. Quantitative Decision Methods (4)

Information Management Concentration

1. Info 472. Information Technology (4)
2. Info 473. Information Forecasting (4)
3. Info 474. Data Base Management (4)
4. Info 475. Information Networking (4)
5. Info 490. Information Policies and Strategies (4)
6. *Four units of electives chosen from:*
 - Info 282. Business Systems I (4)
 - Info 283. Business Systems II (4)
 - Info 471. Information Systems Planning (4)
 - Info 476. Systems Analysis and Design (4)
 - Info 477. Decision Support Systems (4)
 - Info 478. Information Problem Solving (4)
 - Info 479. Studies in Information Management (4)
 - Info 481. Information Processing (4)
 - Info 484. Expert Systems (4)
 - Info 575. Internship in Information Management (4)
 - MSci 360. Statistical Analysis for Management (4)
 - MSci 400. Quantitative Decision Methods (4)
 - MSci 466. Production Planning and Operations Research (4)
 - MSci 470. Inventory Control (4)

Management Concentration

1. *Sixteen units of electives chosen from:*
 - Mgmt 335. Business and Society (4)
 - Mgmt 350. Administrative Communications (4)
 - Mgmt 451. Organization and Management Theory (4)
 - Mgmt 455. Human Resources Management (4)
 - Mgmt 515. Small Business Consulting (4)
 - Mgmt 590. Seminar in Management (4)
2. *Eight units chosen from one of the specialty areas listed below:*

Management Specialty Area

- Mgmt 402. Studies in Organizational Behavior (4)
- Mgmt 405. Management of International Operations (4)
- Mgmt 432. Human Factors in System Development (4)
- Mgmt 459. Work Group Management (4)
- Mgmt 575. Internship in Management (4)

Human Resources Specialty Area

- Mgmt 456. Psychology of Human Resources (4)
- Mgmt 457. Industrial and Labor Relations (4)
- Mgmt 458. Fair Employment Practices (4)
- Mgmt 575. Internship in Management (4)

Management Science Concentration

1. MSci 355. Statistical Software (2)
2. MSci 360. Statistical Analysis for Management (4)
3. MSci 400. Quantitative Decision Methods (4)
4. MSci 466. Production Planning and Operations Research (4)
5. MSci 467. Research Methods (4)
6. MSci 499. Practicum in Management Science (2)
7. *Four units of electives chosen from:*
 - Econ 490. Introduction to Econometrics (4)
 - Info 282. Business Systems I (4)
 - Info 283. Business Systems II (4)
 - Info 473. Information Forecasting (4)
 - MSci 470. Inventory Control (4)
 - MSci 575. Internship in Management Science (4)

Marketing Concentration

1. Mktg 410. Consumer Behavior (4)
2. Mktg 416. Marketing Research (4)
3. Mktg 496. Marketing Planning and Strategy (4)
4. *Four units of electives chosen from:*
 - Mktg 420. Advertising (4)
 - Mktg 430. Professional Selling (4)
 - Mktg 431. Sales Management (4)
5. Eight units of 400- or 500-level marketing courses not previously taken.

Production/Operations Management Concentration

1. Mgmt 432. Human Factors in System Development (4)
2. MSci 360. Statistical Analysis for Management (4)
3. MSci 400. Quantitative Decision Methods (4)
4. MSci 466. Production Planning and Operations Research (4)
5. MSci 468. Advanced Production Management (4)
6. *Four units of electives chosen from:*
 - Acct 344. Cost Accounting (4)
 - Acct 345. Cost Analysis and Control (4)
 - Info 471. Information Systems Planning (4)
 - Mgmt 455. Human Resources Management (4)
 - Mgmt 457. Industrial and Labor Relations (4)
 - MSci 470. Inventory Control (4)
 - MSci 575. Internship in Management Science (4)

Public Administration Concentration

1. PA 380. Introduction to Public Administration (4)
2. PA 462. Public Personnel Administration (4)
3. PA 463. Governmental Budgeting (4)
4. PA 480. Organizational Problems in Public Administration (4)

5. *Eight units of electives chosen from:*

- PA 514. Management of Private Nonprofit Organizations (4)
- PA 516. Public and Non-Profit Project Management (4)
- PA 521. Principles of Planning (4)
- PA 557. Public Sector Labor Relations (4)
- PA 564. Local Public Administration (4)
- PA 568. Accounting for Government and Not-for-Profit Organizations (4)
- PA 575. Internship in Public Administration (4)
- PA 590. Seminar in Public Administration (4)

Small Business Management Concentration

1. Acct 315. Accounting Information Systems (4)
2. Mgmt 442. Small Business Management (4)
3. Mgmt 455. Human Resources Management (4)
4. Mgmt 515. Small Business Consulting (4)
5. Mktg 460. Retailing (4)
- or
one of the following:
 - Mktg 420. Advertising (4)
 - Mktg 430. Professional Selling (4)
 - Mktg 431. Sales Management (4)
6. *Four units of electives chosen from:*
 - Acct 426. Introduction to Taxation I (4)
 - Acct 436. Corporate and Partnership Taxation (4)
 - Mgmt 457. Industrial and Labor Relations (4)
 - Mgmt 458. Fair Employment Practices (4)
 - Mgmt 575. Internship in Management (4)
 - Mktg 420. Advertising (if not taken as a required course) (4)
 - Mktg 430. Professional Selling (if not taken as a required course) (4)
 - Mktg 431. Sales Management (if not taken as a required course) (4)
 - Mktg 460. Retailing (if not taken as a required course) (4)

B.S. IN ADMINISTRATION

Requirements (112 units)

Requirements for the B.S. in Administration:

Lower-division requirements (32 units)

1. Acct 211. Principles of Accounting I (4)
2. Acct 212. Principles of Accounting II (4)
3. Econ 200. Principles of Microeconomics (4)
4. Econ 202. Principles of Macroeconomics (4)
5. Info 101. Introduction to Information Technology (4)
6. Mgmt 230. Business Law (4)
7. MSci 210. Applied Business Statistics (4)
8. *Four units chosen from (also meets the General Education requirement category B1):*
 - Math 110. College Algebra (4)
 - Math 120. Pre-Calculus Mathematics (4)
 - Math 192. Methods of Calculus (4)
 - Math 211. Basic Concepts of Calculus (4)

Upper-division core requirements (36 units)

1. Fin 313. Business Finance (4)
2. Fin 314. Corporate Financial Management (4)
3. Info 309. Information Management (4)
4. *Four units chosen from:*
 - Mgmt 302. Management and Organizational Behavior (4)
 - Psyc 302. Management and Organizational Behavior (4)
5. Mgmt 330. Legal Environment of Business (4)
6. Mgmt 490. Administrative Strategy and Policy (4)
7. Mktg 305. Marketing Principles (4)
8. MSci 304. Principles of Production and Operations Management (4)
9. PA 315. Government-Business Relations (4)

Concentration (44 units)

Choose one concentration from the following:

Note: The concentration electives should be chosen from the electives listed for each concentration or, with the prior approval of the department chair, the student may substitute other courses for these electives. With prior approval, up to two of the concentration electives may be chosen from other academic disciplines. In planning their career goals, students should review course offerings of other departments to determine if specific courses fit their career plans.

Accounting Concentration

1. Acct 315. Accounting Information Systems (4)
2. Acct 344. Cost Accounting (4)
3. Acct 372. Intermediate Accounting (4)
4. Acct 373. Problem Areas in Intermediate Accounting (4)
5. Acct 374. Reporting Issues in Intermediate Accounting (4)
6. Acct 426. Introduction to Taxation I (4)
7. Acct 440. Auditing I (4)

8. *Sixteen units to be chosen from the following (in consultation with advisor):*

- Acct 345. Cost Analysis and Control (4)
- Acct 436. Corporate and Partnership Taxation (4)
- Acct 439. Advanced Accounting (4)
- Acct 441. Auditing II (4)
- Acct 444. Accounting Law, Ethics and Institutions (4)
- Acct 456. Estates and Gifts and other Specialized Taxation Topics (4)

May choose only one of the following:

- Acct 568. Accounting for Government and Not-for-Profit Organizations (4)
- PA 568. Accounting for Government and Not-for-Profit Organizations (4)
- Acct 575. Internship in Accounting (4)
- Acct 590. Seminar in Accounting (4)

Finance Concentration

1. *Four units chosen from:*

- Fin 360. Risk Management and Insurance (4)
- Fin 380. Principles of Real Estate (4)
- 2. Fin 430. Financial Theory and Practice (4)
- 3. Fin 432. Financial Institutions and Capital Formation (4)
- 4. Fin 433. International Business Finance (4)
- 5. Fin 435. Investment Analysis (4)
- 6. Fin 445. Financial Analysis and Decision-Making (4)

7. *Twenty units of electives chosen from:*

- Acct 344. Cost Accounting (4)
- Acct 372. Intermediate Accounting (4)
- Acct 373. Problem Areas in Intermediate Accounting (4)
- Acct 426. Introduction to Taxation I (4)
- Acct 436. Corporate and Partnership Taxation (4)
- Econ 410. Money and Banking (4)
- Econ 475. Public Finance (4)
- Fin 360. Risk Management and Insurance (if not taken previously) (4)
- Fin 380. Principles of Real Estate (if not taken previously) (4)
- Fin 434. Export-Import Financing (4)
- Fin 480. Real Estate Appraisal (4)
- Fin 575. Internship in Finance (4)
- Fin 585. Real Estate Finance (4)
- Mgmt 442. Small Business Management (4)
- MSci 360. Statistical Analysis for Management (4)
- MSci 400. Quantitative Decision Methods (4)

Information Management Concentration

1. Info 472. Information Technology (4)
2. Info 474. Data Base Management (4)
3. Info 475. Information Networking (4)
4. Info 478. Information Problem Solving (4)
5. Info 490. Information Policies and Strategies (4)

6. *Twenty-four units chosen from one of the speciality areas listed below:*

Computer Information Systems Speciality Area

1. Info 282. Business Systems I (4)
2. Info 283. Business Systems II (4)
3. Info 476. Systems Analysis and Design (4)
4. Info 477. Decision Support Systems (4)
5. *Eight units chosen from:*
 - CSci 201. Computer Science I (4)
 - CSci 202. Computer Science II (4)
 - CSci 250. COBOL Programming (4)
 - CSci 260. Machine Organization (4)
 - CSci 290. High Level Language (4)
 - Info 471. Information Systems Planning (4)
 - Info 473. Information Forecasting (4)
 - Info 479. Studies in Information Management (4)
 - Info 481. Information Processing (4)
 - Info 484. Expert Systems (4)
 - Info 575. Internship in Information Management (4)
 - MSci 360. Statistical Analysis for Management (4)
 - MSci 400. Quantitative Decision Methods (4)
 - MSci 466. Production Planning and Operations Research (4)
 - MSci 470. Inventory Control (4)
 - MSci 575. Internship in Management Science (4)

Information Management Speciality Area

1. Info 471. Information Systems Planning (4)
2. Info 473. Information Forecasting (4)
3. Info 481. Information Processing (4)
4. MSci 360. Statistical Analysis for Management (4)
5. *Eight units chosen from:*
 - Info 282. Business Systems I (4)
 - Info 283. Business Systems II (4)
 - Info 476. Systems Analysis and Design (4)
 - Info 477. Decision Support Systems (4)
 - Info 479. Studies in Information Management (4)
 - Info 484. Expert Systems (4)
 - Info 575. Internship in Information Management (4)
 - MSci 400. Quantitative Decision Methods (4)
 - MSci 466. Production Planning and Operations Research (4)
 - MSci 470. Inventory Control (4)
 - MSci 575. Internship in Management Science (4)

International Business Concentration

1. *Four units chosen from:*
 - Anth 470. Culture Change and Dynamics (4)
 - Anth 485. Applied Anthropology and Social Policy (4)
2. *Four units chosen from:*
 - Econ 420. Comparative Economic Systems (4)
 - Econ 430. International Economics (4)
 - Econ 435. Multinational Corporations (4)
3. Fin 433. International Business Finance (4)
4. Mgmt 405. Management of International Operations (4)
5. Mgmt 406. International Business Law (4)
6. Mktg 470. International Marketing Management (4)

7. *Twelve units in the same language chosen from one of the following categories:*

- A. Fren 214. Conversation (4)
- Fren 302. Advanced French Composition (4)
- Fren 309. French for Translators (4)
- B. Ger 214. Conversation (4)
- Ger 309. Advanced German Composition (4)
- Ger 312. Practical Translation (4)
- C. Span 212. Composition (4)
- Span 302. Theory and Practice in Composition (4)
- Span 314. Advanced Conversation (4)
- D. Twelve units of upper-division course work in the same language other than French, German or Spanish.

Note: Students may have any or all of the above listed foreign language courses waived by demonstrating equivalent language proficiency. Responsibility for determining this proficiency in all other languages rests with an elected faculty committee composed of two members each from the School of Business and Public Administration and the Department of Foreign Languages. Students having any of these foreign language courses waived must substitute an equal number of units from the electives listed below.

8. *Eight units of electives chosen from:*

- Anth 460. Language and Culture (4)
- Anth 470. Culture Change and Dynamics (4)
- Anth 485. Applied Anthropology and Social Policy (if not taken previously) (4)
- Econ 420. Comparative Economic Systems (4)
- Econ 430. International Economics (4)
- Econ 450. Economic Development (4)
- Fin 434. Export-Import Financing (4)
- Fren 340. Advanced Conversation (4)
- Ger 310. Advanced German Conversation (4)
- Hist 503. Europe Since 1945 (4)
- Hist 556. Foreign Relations of the United States (4)
- Hum 460. Culture Studies (4)
- Mgmt 515. Small Business Consulting (4)
- Mgmt 575. Internship in Management (4)
- Mgmt 595. Independent Study (4)
- Mktg 416. Marketing Research (4)
- Mktg 472. Import-Export Management (4)
- PSci 300. Western Political Systems (4)
- PSci 400. International Politics (4)
- PSci 500. International Law (4)
- Span 314. Advanced Conversation (if not taken previously as part of the twelve unit language requirement) (4)

Management Science Concentration

1. Info 282. Business Systems I (4)
2. Info 471. Information Systems Planning (4)
3. Info 473. Information Forecasting (4)
4. MSci 355. Statistical Software (2)
5. MSci 360. Statistical Analysis for Management (4)
6. MSci 400. Quantitative Decision Methods (4)
7. MSci 466. Production Planning and Operations Research (4)
8. MSci 467. Research Methods (4)
9. MSci 470. Inventory Control (4)
10. MSci 499. Practicum in Management Science (2)
11. *Eight units of electives chosen from:*
 - Econ 480. Introduction to Mathematical Economics (4)
 - Econ 490. Introduction to Econometrics (4)
 - Info 283. Business Systems II (4)
 - MSci 468. Advanced Production Management (4)
 - MSci 575. Internship in Management Science (4)

Marketing Concentration

1. Mktg 410. Consumer Behavior (4)
2. Mktg 416. Marketing Research (4)
3. Mktg 420. Advertising (4)
4. *Four units chosen from:*
 - Mktg 430. Professional Selling (4)
 - Mktg 431. Sales Management (4)
 - 5. Mktg 450. Logistics (4)
 - 6. Mktg 496. Marketing Planning and Strategy (4)
7. *Twenty units chosen from the following, selected in consultation with a marketing faculty advisor: (A program plan should be filed in the department office. Substitutions from related disciplines are considered by petition.)*
 - Mktg 415. Product Management (4)
 - Mktg 430. Professional Selling (4) (if not taken previously)
 - Mktg 431. Sales Management (4) (if not taken previously)
 - Mktg 438. Industrial Marketing (4)
 - Mktg 446. Advertising Campaign (4)
 - Mktg 460. Retailing (4)
 - Mktg 462. Merchandising (4)
 - Mktg 470. International Marketing Management (4)
 - Mktg 472. Import-Export Management (4)
 - Mktg 575. Internship in Marketing (4)
 - Mktg 590. Seminar in Marketing (4)

MINOR IN BUSINESS ADMINISTRATION**Requirements (28 units)**

Requirements for a minor in Business Administration:

1. Acct 211. Principles of Accounting I (4)
2. Mgmt 230. Business Law (4)
3. Twenty units of lower or upper division electives, usually from one area (i.e., accounting, finance, management, economics, marketing, management science or information management), chosen in consultation with the associate dean.

MINOR IN PUBLIC ADMINISTRATION**Requirements (28 units)**

Requirements for a minor in Public Administration:*Lower-division requirement (4 units)*

1. Econ 200. Principles of Microeconomics (4)

Upper-division requirements (24 units)

1. Econ 475. Public Finance (4)
2. *Four units chosen from:*
 - Mgmt 302. Management and Organizational Behavior (4)
 - Psyc 302. Management and Organizational Behavior (4)
3. *Four units chosen from:*
 - PA 380. Introduction to Public Administration (4)
 - PSci 380. Introduction to Public Administration (4)
4. PA 462. Public Personnel Administration (4)
5. PA 463. Governmental Budgeting (4)
6. PA 480. Organizational Problems in Public Administration (4)

DEPARTMENTAL HONORS

Students majoring in administration are eligible to receive departmental honors if the following conditions are met:

1. At least four courses in the concentration are completed at this university;
2. A minimum of 3.5 grade point average for all courses satisfying the requirements for the major;
3. One of the following:
 - A. A minimum of 3.8 for all courses satisfying the requirements of the concentration;
 - B. A grade of "A" (4.0) in a specific Administration 595 Independent Study course, developed for honors consideration;
 - C. Author or coauthor an article accepted for publication in a leading scholarly journal in their field.

The honor is awarded by the faculty of the department, and students who wish to receive this distinction should initiate the process by submitting a letter of application to the appropriate department office at the beginning of their senior year.

BETA GAMMA SIGMA

The university has an active chapter of Beta Gamma Sigma, a national organization that encourages and honors academic achievement and personal excellence in the study and practice of business. Membership is by invitation extended to undergraduate and graduate business students of high scholarship and good moral character.

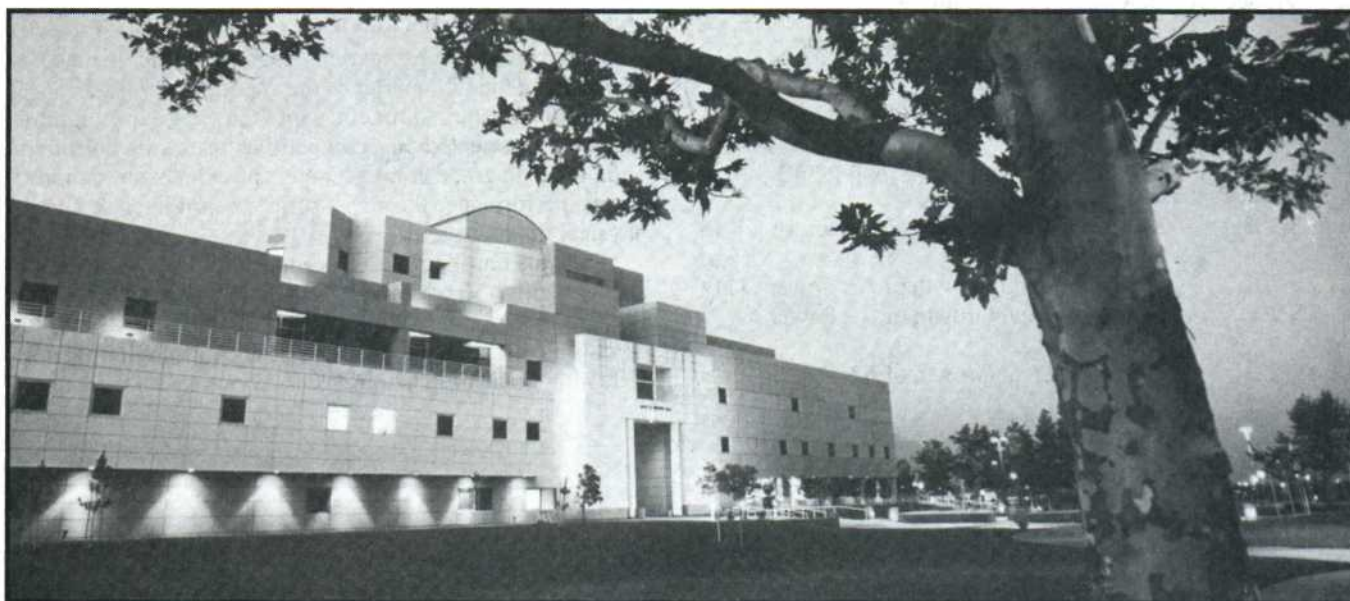
CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Refer to Page 66 for additional certificate information.

Accounting Certificate

Certificate Requirements (32 units)

1. Acct 211. Principles of Accounting I (4)
2. Acct 212. Principles of Accounting II (4)
3. Acct 344. Cost Accounting (4)
4. Acct 372. Intermediate Accounting (4)
5. Acct 373. Problem Areas in Intermediate Accounting (4)
6. Acct 374. Reporting Issues in Intermediate Accounting (4)
7. *Eight units of electives chosen in consultation with an advisor:*
 - Acct 315. Accounting Information Systems (4)
 - Acct 426. Introduction to Taxation I (4)
 - Acct 436. Corporate and Partnership Taxation (4)
 - Acct 439. Advanced Accounting (4)
 - Acct 440. Auditing I (4)
 - Acct 568. Accounting for Government and Not-for-Profit Organizations (4)
 - Acct 590. Seminar in Accounting (4)
 - Fin 313. Business Finance (4)
 - Fin 314. Corporate Financial Management (4)
 - Fin 430. Financial Theory and Practice (4)
 - Fin 445. Financial Analysis and Decision-Making (4)



AEROSPACE STUDIES (AIR FORCE ROTC)

Aerospace Studies Office

Health and Physical Education Building, Room 122
880-5440

Aerospace Studies Program

FACULTY: Major John Edwards, Captain Dan Commons,
Captain Janet Andrepont

Air Force ROTC (AFROTC) is a program designed to commission young men and women as second lieutenants into the active duty Air Force upon completion of a bachelor's degree and AFROTC requirements. AFROTC provides selected students an opportunity to develop those attributes essential to positions of high responsibility as commissioned officers in the U.S. Air Force. In addition, students must demonstrate ability to apply modern principles of management and human relations in the Air Force environment, and master leadership theory and techniques. Oral and written communication skills are emphasized throughout the program. Scholarships are available, but not necessary to participate in the program. Students may pursue any academic major while participating in the Aerospace Studies program and any combination of undergraduate and graduate work is acceptable.

AEROSPACE STUDIES PROGRAM

Program Requirements

Option I (Four Year Program)

Program Requirements (24 units)

The four year program is available to first-time freshmen and those full-time students with at least four years of undergraduate/graduate study remaining.

The General Military Course (GMC) consists of the following academic courses:

1. AS 101. Military Forces in the Contemporary World I (1)
2. AS 102. Military Forces in the Contemporary World II (1)
3. AS 103. Military Forces in the Contemporary World III (1)
4. AS 201. Developmental Growth of Air Power I (1)
5. AS 202. Developmental Growth of Air Power II (1)
6. AS 203. Developmental Growth of Air Power III (1)

The Professional Officer Course (POC) consists of the following academic courses:

1. AS 301. Air Force Leadership (3)
2. AS 302. Total Quality Management (3)
3. AS 303. Professional Military Ethics (3)
4. AS 401. Military Judicial System (3)
5. AS 402. The Military in American Society (3)
6. AS 403. American Defense Policy (3)

Leadership Laboratory

AS 90. Leadership Laboratory (0)

This course meets for two hours each week and awards no credit. Students must enroll in this course each quarter.

Students who successfully complete the GMC then compete in a four-week field training course (noncredit) which takes place the summer following GMC completion. Successful completion of field training is required prior to entry into the POC. Students incur no military obligation for GMC participation unless they qualify for and accept an AFROTC scholarship.

Option II (Two Year Program)

Program Requirements (18 units)

Prerequisite for entry into the two-year program is successful completion of a six-week field training program on an Air Force base during the summer preceding enrollment in the program.

The Professional Officer Course (POC) consists of the following academic courses:

1. AS 301. Air Force Leadership (3)
2. AS 302. Total Quality Management (3)
3. AS 303. Professional Military Ethics (3)
4. AS 401. Military Judicial System (3)
5. AS 402. The Military in American Society (3)
6. AS 403. American Defense Policy (3)

Leadership Laboratory

AS 90. Leadership Laboratory (0)

This course meets for two hours each week and awards no credit. Students must enroll in this course each quarter.

Application to the two-year program should be made early during the fall quarter of the sophomore year. U.S. citizenship is required for entry into the two-year program. Students are selected on a competitive basis with consideration given to grade point average, aptitude, examination scores, performance during an officer board interview and physical fitness test.

Students enrolled in POC incur a military obligation and are paid \$150 per month during the academic year. Graduation and successful completion of the POC leads to a commission as a second lieutenant. The military obligation following graduation is four years of active duty service.

COURSE OFFERINGS IN AEROSPACE STUDIES (AS)

90. Leadership Laboratory

Open only to enrolled Air Force ROTC cadets. Cadets must be concurrently enrolled in an aerospace studies course. Designed to allow cadets to apply leadership techniques and military skills taught in classroom and to develop their confidence as future military officers. (0 units)

Lower Division

101. Military Forces in the Contemporary World I

Examination of roles and norms expected from military officers. Examines roles of U.S. Navy, Marine Corps and Army. Oral and written communication is emphasized. (1 unit)

102. Military Forces in the Contemporary World II

Focus on roles, missions and organization of the Air Force, covering basic elements of air doctrine and functions of general purpose, strategic and aerospace support forces. Oral and written communication is emphasized. (1 unit)

103. Military Forces in the Contemporary World III

"Threat assessment" of selected regions of the world. Examination of low-level conflict as represented by terrorist actions and guerrilla warfare. Analysis of basic elements of strategy which deter war. Oral and written communication is emphasized. (1 unit)

201. Developmental Growth of Air Power I

Development of air power from 1900 to 1940. Focus on events and elements in the early history of air power, especially where these provide significant examples of impact of air power on strategic thought. (1 unit)

202. Developmental Growth of Air Power II

Development of air power from 1941 to 1950. Development of various concepts of employment of air power, with emphasis on factors which have prompted research and technological change. (1 unit)

203. Developmental Growth of Air Power III

Development of air power from 1951 to present. Development of various concepts of employment of air power, with special emphasis on the impact of technology. (1 unit)

Upper Division

301. Air Force Leadership

Analysis of principles and functions of management and leadership with special reference to the Air Force as a model. Group discussions, case studies and films used as teaching devices. Oral and written reports to strengthen communicative skills. (3 units)

302. Total Quality Management

Comparison and contrast of traditional management functions to the "Total Quality Management" approach to leadership. Behavioral aspect of leadership is examined. Group discussions, case studies and films used as teaching devices. Oral and written reports to strengthen communicative skills. (3 units)

303. Professional Military Ethics

Introduction to Air Force ethics and standards of conduct within the officer corps. Special attention to current events are used as a basis for discussions. Group discussions, case studies and films used as teaching devices. Oral and written reports to strengthen communicative skills. (3 units)

401. Military Judicial System

Introduction to military justice system, international laws of armed conflict, and foundations of military professionalism. Oral and written reports to strengthen communicative skills. (3 units)

402. The Military in American Society

Forces and issues in societal context of the American military. Analyzes the influence of social norms, societal pressures, and cultural factors on the role of the military professional. Communicative skills strengthened through extensive classroom presentations. (3 units)

403. American Defense Policy

Examines U.S. security policy with respect to foreign relations, war strategies, and economic challenges. Communicative skills strengthened and abilities oriented to Air Force requirements through presentations. (3 units)

AMERICAN STUDIES

Department of English

University Hall, Room 334
880-5824

Bachelor of Arts

American Studies
Track I (General)
Track II (Credential)

Teaching Credential Program

Multiple Subject

COORDINATOR: Track I: Rodney Simard
Track II: Daniel Whitaker

The American Studies major provides students with a broad introduction to American culture. The major incorporates course work from a variety of disciplines, and it encourages students to recognize the diversity of our culture. Consequently, American Studies is an appropriate program for those students who wish to be informed citizens as well as for those who also are looking for a useful context for careers in education, government, law, library work and related fields.

The major has two tracks. Track I consists of a basic set of requirements in American literature, art and history. These requirements provide students with a historical overview of the culture as well as the investigative methods for understanding that culture. Related electives allow students to pursue their individual interests. This plan totals 72 units. With additional course work in either English or history, a student also can complete a single-subject waiver program for secondary-school teachers. The Department of English coordinates this track and advises all Track I majors.

Like the Liberal Studies major, Track II contains options for credential candidates and non-credential students. Consequently, this Track can qualify students for the waiver of the examination requirement for the multiple subject teaching credential for elementary school instructors. Or, if students choose the noncredential options, the Track still provides a broad undergraduate experience that incorporates the general education requirements of the university while focusing on dominant themes of American culture. Track II totals 154 units. The Liberal Studies Office coordinates this track and advises all Track II majors. See Page 211 for more information concerning the Liberal Studies Program.

Students who are interested in earning a teaching credential in either multiple subject or a single subject should consult the section, "Basic Teaching Credentials," in this catalog, Page 138.

B.A. IN AMERICAN STUDIES (TRACK I)

Requirements (72 units)

Lower-division prerequisites to Track I within general education (12 units):

1. Eng 140. Major American Authors (4)
2. Hist 146. American Civilization (4)
3. PSci 203. American Government (4)

Note: History 146, American Civilization and Political Science 203, American Government fulfill categories D-1 and D-2 respectively in general education requirements. English 140, Major American Authors should be taken in category H of the general education requirements. These units cannot be counted elsewhere in Track I below.

Requirements for the B.A. in American Studies - Track I:

Upper-division requirements (60 units)

A. Concepts and Methods (8 units)

1. AmSt 300. Introduction to American Studies (4)
2. Hum 344. Ideas in American Culture (4)

B. American Arts (12 units)

1. Art 311. Art of the United States to the End of the Nineteenth Century (4)
2. Women and/or minorities:

Four units chosen from:

- Anth 323. Native North American Art (4)
- Art 323. Native North American Art (4)
- Mus 351. Latin American Music (4)
- Mus 352. Afro-American Music (4)

3. American arts:

Four units chosen from:

- Anth 323. Native North American Art (4)
- Art 323. Native North American Art (4)
- Art 413. Modern Art of the United States (4)
- Mus 351. Latin American Music (4)
- Mus 352. Afro-American Music (4)
- Mus 360. Music in the United States (4)
- TA 461. American Drama (4)

Note: Students may receive credit for only one of the following:

- Anth 323. Native North American Art
- Art 323. Native North American Art

C. Historical and Social Contexts (24 units)

1. *Twelve units chosen from group a; and twelve units chosen from one other group b, c, d, e or f below:*

a. Historical Periods:

- Hist 350. The American Colonies, 1607-1783 (4)
- Hist 351. The Evolution of American Democracy, 1783-1840 (4)
- Hist 354. Civil War and Reconstruction (4)
- Hist 356. The United States, 1877-1917 (4)
- Hist 357. The United States, 1917-1945 (4)
- Hist 359. The United States Since 1945 (4)

- b. Economics:
- Econ 333. Women in the Economy (4)
 - Econ 352. The Economics of Poverty and Discrimination (4)
 - Econ 360. Economics of the Environment (4)
- May choose only one of the following:*
- Econ 421. Economic History of the United States (4)
 - Hist 421. Economic History of the United States (4)
- c. Religion:
- Hist 380. History of World Religions (4)
 - Soc 380. Sociology of Religion (4)
 - SSci 345. Religious Expression in America (4)
- d. Women and Minorities in America:
- Anth 305. North American Prehistory (4)
 - Anth 323. Native North American Art (4)
 - Anth 351. Indians of North America (4)
 - Art 323. Native North American Art (4)
 - Econ 333. Women in the Economy (4)
 - Econ 352. The Economics of Poverty and Discrimination (4)
 - Hist 334. Black History II: The American Experience (4)
 - Hist 391. Chicano History (4)
 - Hist 513. Women in U.S. History (4)
 - Hist 565. Ethnic Minorities in American History (4)
 - PSci 340. Sex and Politics (4)
 - PSci 352. Minority Politics (4)
 - Soc 344. Sex Roles: The Life Cycle (4)
 - Soc 410. Racial and Cultural Minorities (4)
 - Soc 440. Power and Privilege (4)
 - Soc 441. Black Social Stratification (4)
 - Soc 442. Chicano Social Stratification (4)
- Note:** Students may receive credit for only one of the following and may apply that credit in either the American Arts Category or the Historical and Social Contexts Category but not both:
- Anth 323. Native North American
 - Art 323. Native North American Art
- e. Political Thought:
- PSci 310. Classical Political Thought (4)
 - PSci 311. Foundations of Modern Political Thought (4)
 - PSci 314. American Political Thought (4)
 - PSci 326. Political Parties and Interest Groups (4)
 - PSci 410. American Constitutional Law (4)
 - PSci 411. The Bill of Rights (4)
 - PSci 530. Studies in Political Theory: Liberalism (4)
 - Soc 310. History of Sociological Theory (4)
- f. Regionalism:
- Anth 315. Archaeology of the Southwest and California (4)
 - Anth 352. Indians of the Southwest (4)
 - Geog 302. Geography of California (4)
 - Geog 350. Conservation and Natural Resources (4)
 - Geog 440. Understanding the City (4)
 - Hist 370. History of California (4)
 - Hist 560. History of the American West (4)

- Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
- PSci 342. The Politics of the Environment (4)

D. American Literature (20 units)

1. *Four units chosen from: (Prerequisite to upper-division American Literature courses.)*
 - Eng 301. Analysis of Poetry (4)
 - Eng 302. Analysis of Drama (4)
 - Eng 303. Analysis of Prose Fiction (4)
 - TA 302. Analysis of Drama (4)
 2. *Twelve units in periods as follows:*
 - Eng 330. American Literature I (4)
 - Eng 331. American Literature II (4)
 - Eng 332. American Literature III (4)
- Note:** At least four units on American minorities and/or women must be chosen from categories D3, E, or F below.
3. *Four units of electives chosen from:*
 - Eng 314. American Indian Literature (4)
 - Eng 322. Studies in Literary Themes, Genres, or Authors (with appropriate topic approved by American Studies, Track II Advisor.) (4)
 - Eng 339. African American Literature (4)

E. American Themes Elective (4 units)

1. Four additional upper-division units chosen from one of the groups a, b, c, d, e or f in category C;

OR

2. Four units chosen from courses on American subjects in anthropology, economics, geography, history, philosophy, political science and sociology in consultation with an American Studies, Track I, advisor.

F. Capstone (4 units)

1. *Four units chosen from:*
 - AmSt 590. Special Topics in American Studies (4)
 - Eng 515. Senior Seminar in Literature (With appropriate topic approved by American Studies, Track II coordinator.) (4)

B.A. IN AMERICAN STUDIES (TRACK II)

Requirements (154 units Noncredentialed Students/162 units Credential Candidates)

Students fulfill both the general education and the liberal studies requirements by pursuing this plan as directed below. EACH COURSE CAN BE COUNTED ONLY ONCE WITHIN THE PLAN. The distribution of units is as follows:

BASIC PROGRAM (Noncredentialed students 134 units/credential candidates 142 units)

- A. Language Arts (24 units)
- B. Humanities and the Arts (noncredentialed students 24 units/credential candidates 28 units)
- C. Mathematics and Natural Sciences (noncredentialed students 32 units/credential candidates 36 units)
- D. Social and Behavioral Sciences (24 units)
- E. Lifelong Understanding (noncredentialed students 6 units/credential candidates 10 units)
- F. Multicultural/Gender Category
- G. General Education Elective Options (4-8 units)
- H. American Studies Themes (noncredentialed students 20 units/credential candidates 16 units)

CONCENTRATION (20 units)

- I. American Literature (20 units)

AMERICAN STUDIES TOTAL (Noncredentialed students 154 units/Noncredentialed candidates 162 units)

Requirements for the B.A. in American Studies - Track II:

A 2.0 grade point average must be maintained in all breadth areas of the Basic Program for noncredentialed students. Credential candidates who do not maintain an overall grade point average of 2.89 will need to pass subject matter competency assessment prior to Student Teaching.

A. Language Arts Breadth Area (24 units)

1. Written Communication (G.E.):
Eng 101. Freshman Composition (4)
2. Upper-division Writing Requirement (G.E.), American Studies recommends English 495. Expository Writing; but any of the following courses qualifies:
Four units chosen from:
Educ 495. Expository Writing for Education (4)
Eng 495. Expository Writing (4)
Hum 495. Expository Writing for the Humanities (4)
Mgmt 495. Expository Writing for Administration (4)
NSci 495. Expository Writing for the Natural Sciences (4)
SSci 495. Expository Writing for the Social Sciences (4)

Note: This requirement also can be met by passing a proficiency examination. Students who pass the examination will be required instead to take four units of upper-division general education course work from among those courses listed under the General Education Elective Options, see category G.

3. Oral Communication (G.E.):
Comm 120. Oral Communication (4)
4. Literature (G.E.):
Four units chosen from:
Eng 110. World Literature I (4)
Eng 111. World Literature II (4)
Eng 160. World Drama (4)
Eng 170. Studies in Literature (4)
TA 160. World Drama (4)
TA 212. Oral Interpretation of Literature (4)

5. Development of Language:
 - a. Credential candidates
Four units as follows:
Eng 311. The English Language (4)
 - b. Noncredentialed students
Four units chosen from:
Eng 311. The English Language (4)
Fren 306. French Linguistics (4)
Phil 484. Philosophy of Language (4)
Span 415. Comparative Linguistics: Spanish/English (4)

6. Analysis of Literature:
Four units chosen from:
Eng 301. Analysis of Poetry (4)
Eng 302. Analysis of Drama (4)
Eng 303. Analysis of Prose Fiction (4)
TA 302. Analysis of Drama (4)

B. Humanities and the Arts Breadth Area (noncredentialed students 24 units/credential candidates 28 units)

1. Critical Thinking (G.E.):
Four units chosen from:
Comm 180. Critical Thinking Through Argumentation (4)
Math 180. Critical Thinking Through Problem Solving (4)
Phil 105. Critical Thinking Through Argument Analysis (4)
Phil 205. Critical Thinking Through Symbolic Logic (4)
Psyc 105. Critical Thinking Through Problems Analysis (4)
Soc 180. Critical Thinking about Social Problems (4)
2. Philosophy (G.E.):
Four units chosen from:
Phil 190. Introduction to Philosophical Issues (4)
Phil 191. Introduction to Values, Technology and Society (4)
Phil 192. Introduction to Philosophy of Religion (4)
Phil 193. Introduction to Eastern Philosophy (4)
Phil 194. Introduction to Knowledge and Reality (4)
3. Foreign Language (G.E.):
Four units chosen from:
FLan 150. Independent Intermediate Language Study (4)
Fren 150. Intermediate French (4)
Fren 212. Composition (4)
Fren 214. Conversation (4)
Fren 216. Introduction to Literary Texts (4)

- Ger 150. Intermediate German (4)
 Ger 212. Composition (4)
 Ger 214. Conversation (4)
 Ger 216. Introduction to Literary Texts (4)
 Span 150. Intermediate Spanish (4)
 Span 155. Intermediate Spanish for Spanish Speakers (4)
 Span 212. Composition (4)
 Span 214. Conversation (4)
 Span 216. Introduction to Literary Texts (4)

Note: Students pursuing the B.A. in American Studies, Track II, cannot include in category B3 the following courses:

- Fren 290. French Literature in English
 Ger 290. German Literature in English
 Span 290. Spanish and Latin American Literature in English

4. Arts:

- a. *Four units in art (G.E.) chosen from:*
 Art 200. Studies in Art (4)
 Mus 180. Studies in Music (4)
 TA 260. Introduction to Theatre (4)
 b. *Credential candidates only, a minimum of four additional units in arts activity/arts in the classroom selected from the two disciplines not chosen in section a (students choosing Theatre Arts 260 in section a cannot use Dance courses in section b) and chosen from:*

- Art 211. Visual Composition and Perception (2.5)
 Art 212. Color and Light (2.5)
 Art 213. Form in Space and Time (2.5)
 Art 214. Methods and Materials (2.5)
 Art 215. Basic Drawing (2.5)
 Art 216. Life Drawing (2.5)
 Art 335. Painting I (5)
 Art 354. Ceramics I (5)
 Art 368. Woodworking and Furniture Design I (5)
 Art 375. Glass (5)
 Art 380. Communications Design I (5)
 Art 390. Beginning Photography (5)
 Art 395. Art in the Classroom (4)
 Dan 200. Studies in Dance (2)
 Dan 300. Dance Technique (2)
 Dan 481. Creative Dance in the Classroom (4) (if not taken in category E.3.b.)
 Mus 205A. Class Guitar I (1)
 Mus 206. Class Voice (1)
 Mus 216. Class Recorder I (1)
 Mus 217. Class Recorder II (1)
 Mus 220. Class Piano I (1)
 Mus 221. Class Piano II (1)
 Mus 222. Class Piano III (1)
 Mus 380. Chamber Orchestra (1)
 Mus 381. Wind Ensemble (1)
 Mus 385. Concert Choir (1)
 Mus 391. Jazz Ensemble (1)
 Mus 410. Music in the Elementary Schools (4)
 Mus 516. Teaching Recorder in the Elementary Classroom I (2)

- Mus 517. Teaching Recorder in the Elementary Classroom II (2)
 Mus 531. Musical Development for the Elementary Teacher (4)
 Mus 550. Music in the Elementary Classroom (4)
 Mus 570. Music Creativity for the Elementary Classroom (2)
 TA 235. Fundamentals of Stage Design (4)
 TA 251. Acting I (3)
 TA 252. Acting II (3)
 TA 320A. Theatre Practicum: Performance (2)
 TA 320B. Theatre Practicum: Imagination Players (2)
 TA 320C. Theatre Practicum: Touring Theatre (2)
 TA 320E. Theatre Practicum: Special Projects (2)
 TA 337. Design: Costume Design (3)
 TA 385. Acting for Non-Majors (4)
 TA 481. Creative Drama in the Classroom (4)
 TA 483. Children's Theatre (4)
 TA 484. Readers Theatre in the Classroom (4)

5. Electives in Humanities:

Four units chosen from groups 1 or 2 below: (When group 1 is chosen the appropriate 102 course is counted in category G.2.) Students with two years' high school study in selected language will not receive credit in major for 101 or 102.

1. FLan 101. Independent Language Study I (4)
 Fren 101. College French I (4)
 Ger 101. College German I (4)
 Span 101. College Spanish I (4)
 2. *Four upper-division units chosen from:* communication, humanities, philosophy and foreign languages and literatures in translation (including French, German, Spanish and other languages and foreign literatures taught in English)

OR

Four upper-division units chosen from: courses in art history and music history.

6. Integrative Capstone in the Humanities

Four units chosen from:

- Hum 325. Perspectives on Gender (4) (also counts in category F1)
 Hum 335. The Origin and Contemporary Role of Latino Culture (4) (also counts in category F1)
 Hum 344. Ideas in American Culture (4)

Note: Students may receive credit for only one of the following:

- Hum 325. Perspectives on Gender
 NSci 325. Perspectives on Gender
 SSci 325. Perspectives on Gender

C. Mathematics and Natural Sciences Breadth Area (noncredential students 32 units/credential candidates 36 units)

1. Mathematics (G.E.):

Four units chosen from:

- Math 110. College Algebra (4)
 Math 115. The Ideas of Mathematics (4)

- Math 120. Pre-Calculus Mathematics (4)
 Math 192. Methods of Calculus (4)
 Math 211. Basic Concepts of Calculus (4)
2. Mathematical Applications:
Four units chosen from:
 Math 211. Basic Concepts of Calculus (4)
 Math 212. Calculus II (4)
 Math 302. Problem Solving in Mathematics (4)
Note: Math 211. Basic Concepts of Calculus may not be taken for credit by students who have received credit for this course in category C1.
3. Life Science (G.E.):
Five units chosen from:
 Biol 100. Topics in Biology (5)
 Biol 200. Biology of the Cell (5)
 Biol 250. Biology of Ecosystems (5)
 HSci 120. Health and Society: An Ecological Approach (5)
4. Physical and Earth Sciences:
 A. *Noncredential students, a minimum of five units chosen from:*
 Chem 100. Chemistry in the Modern World (5)
 Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
 Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
 Geog 103. Physical Geography (5)
 Geol 101. Physical Geology (5)
 Phys 100. Physics in the Modern World (5)
 Phys 103. Descriptive Astronomy (5)
 Phys 121. Basic Concepts of Physics (5)
 Phys 221. General Physics (5)
 B. *Credential candidates, (9 units) one of the following three-course sequences (1, 2 or 3) to include one course in each of the physical sciences (physics and chemistry) and earth/space sciences (geology, geography and astronomy):*
 1. a. *One of the following:*
 Chem 100. Chemistry in the Modern World (5)
 Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
 Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
 b. Geol 304. Geology in the Classroom (2)
 c. Phys 304. Physics in the Classroom (2)
 2. a. *One of the following:*
 Phys 100. Physics in the Modern World (5)
 Phys 121. Basic Concepts of Physics (5)
 Phys 221. General Physics (5)
 b. Chem 304. Chemistry in the Classroom (2)
 c. Geol 304. Geology in the Classroom (2)
 3. a. *One of the following:*
 Geog 103. Physical Geography (5)
 Geol 101. Physical Geology (5)
 Phys 103. Astronomy (5)
 b. Chem 304. Chemistry in the Classroom (2)
 c. Phys 304. Physics in the Classroom (2)

5. Special Topics in Science and Technology (G.E.):
Two units chosen from:
 Biol 216. Genetics and Society (2)
 Biol 217. Biology of Sexually Transmitted Diseases (2)
 Chem 105. Chemicals in Our Environment (2)
6. Mathematics and Natural Sciences Electives:
 a. *Credential candidates, eight units as follows:*
 1. CSci 127. Introduction to Computer Technology for Educators (4)
 2. Math 301. Basic Mathematics for Educators (4)
 b. *Noncredential students, eight units, at least four units must be upper-division, chosen from: biology, chemistry, computer science, geology, health science, mathematics, natural sciences or physics courses. At least two units must be chosen from:*
 CSci 121. Computer Technology and People (2)
 CSci 124. Exploring the Information Superhighway (2)
 CSci 127. Introduction to Computer Technology for Educators (4)

Note: Students cannot receive credit for both:

- CSci 121. Computer Technology and People
 and
 CSci 127. Introduction to Computer Technology for Educators

7. Integrative Capstone in the Natural Sciences (G.E.):
Four units chosen from:
 NSci 300. Science and Technology (4)
 NSci 310. The Environment and Human Survival (4)
 NSci 312. Scientific Contributions to the Development of Civilization (4)
 NSci 314. Life in the Cosmos (4)
 NSci 320. Energy (4)
 NSci 325. Perspectives on Gender (4) (also counts in category F1)
 NSci 351. Health and Human Ecology (4)
 NSci 360. Legacy of Life (4)

Note: Students may receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender
 NSci 325. Perspectives on Gender
 SSci 325. Perspectives on Gender

D. Social and Behavioral Sciences Breadth Area (24 units)

1. American History and Civilization (G.E.):
Four units chosen from:
 Hist 146. American Civilization (4)
 Hist 200. United States History to 1877 (4)
 Hist 201. United States History, 1877 to the Present (4)

2. American Institutions (G.E.):
 PSci 203. American Government (4)

Note: The American History, Constitution, State and Local Government requirement can be met by taking Political Science 203 and either History 146, 200 or 201. However, even if this requirement is met by examination, students must still take eight units of lower-division coursework, chosen from categories D3 and D4 and counted in categories D1 and D2.

3. World Cultures (G.E.):

Four units chosen from:

- Anth 140. World Civilizations I, the Rise of Civilization (4)
 Hist 140. World Civilizations I, the Rise of Civilization (4)
 Hist 142. World Civilizations II, the Civilizations of the East and West (4)
 Hist 144. World Civilizations III, the Expansion of Europe (4)
 SSci 165. Regions and Peoples of the World (4)

4. Discipline Perspectives (G.E.):

Four units chosen from:

- Anth 100. Introduction to Anthropology: Human Evolution (4)
 Anth 102. Introduction to Anthropology: Culture and Society (4)
 Econ 104. Economics of Social Issues (4)
 ES 100. Ethnicity and Race in America (4)
 Geog 100. Introduction to Human Geography (4)
 PSci 100. Introduction to Political Science (4)
 Psyc 100. Introduction to Psychology (4)
 Soc 100. The Study of Society (4)

5. Social and Behavioral Sciences Elective:

a. *Credential candidates, four units as follows:*

- Psyc 320. Psychology of Middle Childhood (4)

b. *Noncredential students, four upper-division units chosen from: anthropology, criminal justice, economics, geography, history, political science, psychology, social science, sociology and women's studies.*

6. Integrative Capstone in the Social and Behavioral Sciences:

Four units chosen from:

- SSci 300. Nonwestern World (4)
 SSci 304. Contemporary Latin America (4)
 SSci 315. Cultural Adaptation: The Quest for Survival (4)
 SSci 316. Race and Racism (4) (also counts in category F1)
 SSci 320. Understanding Capitalism (4)
 SSci 321. Urbanization and Urban Environment (4)
 SSci 325. Perspectives on Gender (4) (also counts in category F1)
 SSci 343. Understanding Socialism (4)
 SSci 345. Religious Expression in America (4)
 SSci 350. Roots of Modern Racism in America (4) (also counts in category F1)

Note: *Students may receive credit for only one of the following courses:*

- Hum 325. Perspectives on Gender
 NSci 325. Perspectives on Gender
 SSci 325. Perspectives on Gender

E. Lifelong Understanding (Noncredential 6 units/
Credential candidates 10 units)

1. The Whole Person - physical and physiological issues (G.E.):

Two units chosen from:

- NSci 110. Health and Self Care (2)
 PE 205. Foundations for Lifetime Fitness (2)

2. The Whole Person - social and psychological issues (G.E.):

Two units chosen from:

- Psyc 115. Personal and Social Adjustment (2)
 Soc 110. Choices in the Life Course (2)

3. Physical Education (G.E.):

a. *Noncredential candidates, two units chosen from:*

- PE 101. Individual and Dual Activities (2)
 PE 114. Physical Fitness and Conditioning Activities (2)
 PE 117. Combative Activities (2)
 PE 121. Team Activities (2)
 PE 137. Aquatic Activities
 PE 141. Dance Activities (2)
 PE 146. Outing Skills Activities (2)
 PE 147. A Fitness Odyssey (2)
 PE 148. Leisure Sports (2)
 PE 149. Independent Activity Project (2)

b. *Credential students*

1. Two units chosen from courses listed in (3a) above. Students are encouraged to elect a dance course, PE 141.
2. *Four units chosen from:*
 Dan 481. Creative Dance in the Classroom (4) (if not taken in category B.4.b.)
 PE 352. Movement for Children (4)

F. Multicultural/Gender Category

All students must take one upper-division course designated as meeting this requirement, chosen from groups 1 or 2 below:

1. An appropriate Integrative capstone course in one of the following categories: B6, C7, or D6 or one of the following:
 Hum 325. Perspectives on Gender (4)
 Hum 335. The Origin and Contemporary Role of Latino Culture (4)
 NSci 325. Perspectives on Gender (4)
 SSci 316. Race and Racism (4)
 SSci 325. Perspectives on Gender (4)
 SSci 350. Roots of Modern Racism in America (4)
2. An upper-division course that also fulfills the general elective requirement in category G1.

G. General Education Elective Options Category (4-8 units)

A minimum of four units must be taken from this category to satisfy general education requirements. As noted in category A2, students who pass the 495 proficiency examination must take four units of upper-division general education courses in this category in addition to the minimum four elective units. COURSES COUNTED IN THIS CATEGORY CANNOT BE COUNTED ELSEWHERE IN AMERICAN STUDIES TRACK II.

1. *Upper-division general education elective courses that satisfy the Multicultural/Gender requirement:*
 Anth 325. Human Variation and the Concept of Race (4)

- Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 Comm 304. Intercultural Communication (4)
 Comm 401. Gender, Race and the Mass Media (4)
 CJus 451. Women and Crime (4)
 Econ 352. The Economics of Poverty and Discrimination (4)
 Eng 314. American Indian Literature (4)
 Hum 460. Cultural Studies (4)
 Mus 308. Women in Music (4)
 Phil 364. Philosophy of Race and Gender (4)
 TA 462. Afro-American Theatre and Drama (4)
2. *Other elective courses: Lower-division course work from any of the areas marked (G.E.) in categories B through D above that is in excess of the units required (including French 101, Spanish 101 and German 101; however, students with two years' high school study in selected language will not receive credit in major for 101 or 102) or units chosen from the courses that follow:*
- Art 210A. Western Art History: Prehistoric Times Through the Middle Ages (4)
 Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
 Art 210C. Western Art History: Modern Art-1750 to the Present (4)
 CSci 124. Exploring the Information Superhighway (2)
 CSci 127. Introduction to Computer Technology for Educators (4)
 Eng 140. Major American Authors (4)
 Mus 225. Music in the Theatre (4)
 Mus 235. Popular Music Literature (4)
 Psyc 201. Developmental Psychology (4)
 WStd 200. Introduction to Women's Studies (4)

Note: Students cannot receive credit for both:

- CSci 121. Computer Technology and People
 and
 CSci 127. Introduction to Computer Technology for Educators

H. American Studies Themes (Noncredential students 20 units/Credential candidates 16 units)

1. *Sixteen units chosen from:*
- AmSt 300. Introduction to American Studies (4)
 Art 311. Art of the United States to the End of the 19th Century (4)
 Econ 421. Economic History of the United States (4)
 Hist 351. The Evolution of American Democracy, 1783-1840 (4)
 Hist 421. Economic History of the United States (4)
 PSci 314. American Political Thought (4)
2. *Noncredential students only, four additional units chosen from:*
- Art 323. Native North American Art (4)
 Art 413. Modern Art of the United States (4)
 Mus 351. Latin American Music (4)
 Mus 352. Afro-American Music (4)
 Mus 360. Music in the United States (4)
 TA 461. American Drama (4)

I. American Literature (20 units)

1. *Upper-division survey, twelve units as follows:*

- Eng 330. American Literature I (4)
 Eng 331. American Literature II (4)
 Eng 332. American Literature III (4)

Note: Students are advised to take English 140. Major American Authors, before beginning this survey. English 140. Major American Authors counts under the General Education Elective Options, category G.

2. *Electives, eight units chosen from: (a course in American minorities and/or women must be included)*
- AmSt 590. Special Topics in American Studies (4)
 Eng 314. American Indian Literature (4)
 Eng 320. Children's Literature (4)
 Eng 322. Studies in Literary Themes, Genres, or Authors (with appropriate topic approved by American Studies, Track II, coordinator) (4)
 Eng 327. Literature for Adolescents and Young Adults (4)
 Eng 339. African American Literature (4)
 Eng 515. Senior Seminar in Literature (with appropriate topic approved by American Studies, Track II, coordinator) (4)

COURSE OFFERINGS IN AMERICAN STUDIES (AmSt)

Upper Division

300. Introduction to American Studies

Concepts and methods essential to an interdisciplinary approach to American literature and art in a historical context. (4 units)

590. Special Topics in American Studies

Advanced independent study of selected figures, themes, or periods in American literature and art in a historical context. May be repeated for credit as topics change. *Prerequisites:* American Studies 300; Art 311; Humanities 344; one of the following: English 331, 332 or 333; and consent of department. (4 units)

ANTHROPOLOGY

Department of Anthropology

Faculty Office Building, Room 249
880-5502

Bachelor of Arts

Anthropology
Track A - General
Track B - Museum Studies

Minor

Anthropology

Certificate Programs

Latin American Studies
Museum Studies

FACULTY: Russell Barber (Chair), Frances Berdan,
Ellen Gruenbaum, James Pierson, Peter Robertshaw

The study of anthropology promotes an understanding of self and all humankind by exploring the human condition at all times and in all places. In the modern world in which every society depends upon other societies, ignorance of the goals, values and ways of life of others may become a fear leading to discrimination and racism in the community or to war and oppression between nations. The challenges of desert life for the Australian Aborigine and the problems of contemporary ghetto existence are of equal interest to the anthropologist, and courses in these topics and world ethnography are offered by the Anthropology Department. Human physical and cultural evolution, the distribution and significance of cultural differences, the history and ecology of specific areas, and the role of language in culture are treated in courses in physical anthropology, cultural anthropology, archaeology and prehistory, and linguistics. The anthropology major involves a two-track system, Track A (general anthropology) and Track B (museum studies).

Participation in The California State University's International Programs is one way students can experience other cultures first-hand. For further information, see Page 22.

B.A. IN ANTHROPOLOGY TRACK A (GENERAL ANTHROPOLOGY)

Requirements (48 units)

Requirements for the B.A. in Anthropology - Track A:

1. Anth 100. Introduction to Anthropology: Human Evolution (4)
2. Anth 102. Introduction to Anthropology: Culture and Society (4)
3. Anth 500. Great Ideas in Anthropology (4)

4. Archaeology/physical anthropology
A minimum of eight units chosen from:
 - Anth 302. African Archaeology (4)
 - Anth 303. Prehistory of the Middle East and Europe (4)
 - Anth 305. North American Prehistory (4)
 - Anth 306. Aztecs, Maya and Their Predecessors (4)
 - Anth 307. Incas and Their Predecessors (4)*May choose only one of the following:*
 - Anth 312. Historical Archaeology (4)
 - Hist 312. Historical Archaeology (4)
 - Anth 315. Archaeology of the Southwest and California (4)
 - Anth 319. Experimental Archaeology and Ethnoarchaeology (5)
 - Anth 320. Archaeological Survey and Excavation (5)
 - Anth 321. Archaeological Laboratory Analysis (5)*May choose only one of the following:*
 - Anth 323. Native North American Art (4)
 - Art 323. Native North American Art (4)*May choose only one of the following:*
 - Anth 324. Pre-Columbian Art (4)
 - Art 324. Pre-Columbian Art (4)- Anth 325. Human Variation and the Concept of Race (4)
- Anth 326. Human Origins (4)
- Anth 327. Primate Evolution and Ecology (4)
5. Anthropology culture areas
Eight units chosen from:
 - Anth 351. Indians of North America (4)
 - Anth 352. Indians of the Southwest (4)
 - Anth 354. Cultures of Mexico and Central America (4)
 - Anth 356. Cultures of South America (4)
 - Anth 357. African Societies (4)
 - Anth 358. Peoples of the Middle East (4)
 - Anth 360. Peoples of Australia (4)
 - Anth 361. Peoples of Micronesia, Melanesia and Polynesia (4)
6. Anthropology theory
Twelve units chosen from:
 - Anth 300. Archaeology (4)
 - Anth 330. Cross-Cultural Child-Rearing Practices (4)
 - Anth 331. Anthropology of Human Development (4)
 - Anth 332. Cross-Cultural Perspectives on Aging (4)
 - Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 - Anth 335. Cross-Cultural Perspectives on Crime and Deviance (4)
 - Anth 375. Museum Methods (4)
 - Anth 460. Language and Culture (4)
 - Anth 466. Anthropology of Health, Illness and Healing (4)
 - Anth 470. Culture Change and Dynamics (4)
 - Anth 475. Cultural Ecology (4)
 - Anth 480. Magic, Religion and Science (4)
 - Anth 485. Applied Anthropology and Social Policy (4)
 - Anth 490. Systems of Social Organization (4)
 - Anth 492. Economic Anthropology (4)
 - Anth 493. Urban Anthropology (4)

7. Eight additional upper-division units in anthropology (four units may be from a related field, as approved by an advisor).

B.A. IN ANTHROPOLOGY TRACK B (MUSEUM STUDIES)

Requirements (52 units)

Requirements for the B.A. in Anthropology - Track B:

1. Anth 100. Introduction to Anthropology: Human Evolution (4)
2. Anth 102. Introduction to Anthropology: Culture and Society (4)
3. Anth 375. Museum Methods (4)
4. Archaeology/physical anthropology
A minimum of four units chosen from:
 - Anth 302. African Archaeology (4)
 - Anth 303. Prehistory of the Middle East and Europe (4)
 - Anth 305. North American Prehistory (4)
 - Anth 306. Aztecs, Maya and Their Predecessors (4)
 - Anth 307. Incas and Their Predecessors (4)*May choose only one of the following:*
 - Anth 312. Historical Archaeology (4)
 - Hist 312. Historical Archaeology (4)
- Anth 315. Archaeology of the Southwest and California (4)
- Anth 319. Experimental Archaeology and Ethnoarchaeology (5)
- Anth 320. Archaeological Survey and Excavation (5)
- Anth 321. Archaeological Laboratory Analysis (5)
May choose only one of the following:
 - Anth 323. Native North American Art (4)
 - Art 323. Native North American Art (4)
- May choose only one of the following:*
 - Anth 324. Pre-Columbian Art (4)
 - Art 324. Pre-Columbian Art (4)
- Anth 325. Human Variation and the Concept of Race (4)
- Anth 326. Human Origins (4)
- Anth 327. Primate Evolution and Ecology (4)
5. Anthropology culture areas
Four units chosen from:
 - Anth 351. Indians of North America (4)
 - Anth 352. Indians of the Southwest (4)
 - Anth 354. Cultures of Mexico and Central America (4)
 - Anth 356. Cultures of South America (4)
 - Anth 357. African Societies (4)
 - Anth 358. Peoples of the Middle East (4)
 - Anth 360. Peoples of Australia (4)
 - Anth 361. Peoples of Micronesia, Melanesia and Polynesia (4)
6. Anthropology theory
Four units chosen from:
 - Anth 300. Archaeology (4)
 - Anth 330. Cross-Cultural Child-Rearing Practices (4)

- Anth 331. Anthropology of Human Development (4)
- Anth 332. Cross-Cultural Perspectives on Aging (4)
- Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
- Anth 335. Cross-Cultural Perspectives on Crime and Deviance (4)
- Anth 460. Language and Culture (4)
- Anth 466. Anthropology of Health, Illness and Healing (4)
- Anth 470. Culture Change and Dynamics (4)
- Anth 475. Cultural Ecology (4)
- Anth 480. Magic, Religion and Science (4)
- Anth 485. Applied Anthropology and Social Policy (4)
- Anth 490. Systems of Social Organization (4)
- Anth 492. Economic Anthropology (4)
- Anth 493. Urban Anthropology (4)
- Anth 500. Great Ideas in Anthropology (4)
- 7. Anth 575. Internship in Anthropology (2-5) for a total of (8)
- 8. CSci 121. Computer Technology and People (2)
- 9. CSci 123. Using Computer Software (2)
- 10. *Four units chosen from:*
 - PA 380. Introduction to Public Administration (4)
 - PSci 380. Introduction to Public Administration (4)
- 11. *A minimum of twelve units chosen from:*
 - Anth 321. Archaeological Laboratory Analysis (if not chosen in Category 4 above.) (5)
 - Art 211. Visual Composition and Perception (2.5)
 - Art 212. Color and Light (2.5)
 - Art 213. Form in Space and Time (2.5)
 - Art 214. Methods and Materials (2.5)
 - Art 380. Communications Design I (4)
 - Art 390. Beginning Photography (5)
 - Comm 341. Introduction to Public Relations (4)
 - Geog 301. Cartography (4)
 - PA 480. Organizational Problems in Public Administration (4)

MINOR IN ANTHROPOLOGY

Requirements (28 units)

Requirements for a minor in Anthropology:

1. Anth 100. Introduction to Anthropology: Human Evolution (4)
2. Anth 102. Introduction to Anthropology: Culture and Society (4)
3. Twenty upper-division units chosen in consultation with an advisor.

DEPARTMENTAL HONORS

DEPARTMENTAL HONORS

Students majoring in anthropology are eligible to receive honors in anthropology at graduation if the following conditions are met:

1. At least one-half of the course work required by the major is completed at this university;
2. A grade point average of at least 3.5 in the major, both at this university and overall;
3. An overall undergraduate grade point average of 3.0 ("B") or better;
4. Successful completion of Anthropology 597. Senior Honors Project, resulting in a thesis paper.

Applications for candidacy must be made by the beginning of the senior year. Approval of candidacy and of the project and project advisor rests with the department. The project advisor and one other faculty reader from the department will have responsibility for evaluation of the completed thesis paper.

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Latin American Studies

Certificate Requirements (32 units)

1. *Thirty-two units to be chosen from the following: (No more than twelve units may be taken from any one discipline.)*

- Anth 306. Aztecs, Maya and Their Predecessors (4)
 Anth 307. Incas and Their Predecessors (4)

May choose only one of the following:

- Anth 324. Pre-Columbian Art (4)
 Art 324. Pre-Columbian Art (4)
 Anth 354. Cultures of Mexico and Central America (4)

- Anth 356. Cultures of South America (4)
 Art 328. Mexican Art (4)
 FLa 320. Masterpieces of Literature (when topic pertains to Latin America) (4)
 Geog 321. Area Study: Latin America (4)
 Geog 390. Selected Topics in Geography: Tropical Geography (4)
 Hist 390. History of Modern Mexico (4)
 Hist 469. Colonial Latin America (4)
 Hist 470. Modern Latin America (4)
 Hum 460. Cultural Studies (when topic pertains to Mexico or Latin America) (4)
 Mus 351. Latin American Music (4)

- SSci 304. Contemporary Latin America (4)
 Span 400. Masterpieces in Spanish and Spanish American Literature (when topic pertains to Latin America) (4)
 Span 440. Mexican Literature (4)
 Span 514. Seminar in Hispanic Language, Literature or Film (when topic pertains to Latin America) (4)

Certificate in Museum Studies

Certificate Requirements (34 units)

1. Anth 375. Museum Methods (4)
2. Anth 575. Internship in Anthropology (2-5) for a total of (8)
3. Art 345. Gallery Management (2)
4. *A minimum of twelve units of electives, to be chosen from one of the following three groups of courses (A, B or C):*

Group A

- Anth 300. Archaeology (4)
 Anth 302. African Archaeology (4)
 Anth 303. Prehistory of the Middle East and Europe (4)
 Anth 305. North American Prehistory (4)
 Anth 306. Aztecs, Maya and Their Predecessors (4)
 Anth 307. Incas and Their Predecessors (4)

May choose only one of the following:

- Anth 312. Historical Archaeology (4)
 Hist 312. Historical Archaeology (4)
 Anth 315. Archaeology of the Southwest and California (4)
 Anth 320. Archaeological Survey and Excavation (5)
 Anth 321. Archaeological Laboratory Analysis (5)

May choose only one of the following:

- Anth 323. Native North American Art (4)
 Art 323. Native North American Art (4)

May choose only one of the following:

- Anth 324. Pre-Columbian Art (4)
 Art 324. Pre-Columbian Art (4)

Group B

- Anth 351. Indians of North America (4)
 Anth 352. Indians of the Southwest (4)
 Anth 354. Cultures of Mexico and Central America (4)
 Anth 357. African Societies (4)
 Anth 358. Peoples of the Middle East (4)
 Anth 360. Peoples of Australia (4)
 Anth 361. Peoples of Micronesia, Melanesia and Polynesia (4)
 Art 210A. Western Art History: Prehistoric Times through the Middle Ages (4)
 Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
 Art 210C. Western Art History: Modern Art - 1750 to the Present (4)
 Art 306. Greek and Roman Art (4)
 Art 308. Medieval Art (4)

Art 311. Art of the United States to the End of the 19th Century (4)

Art 314. The Art of Indigenous Peoples (4)

Art 316. Arts of the Ancient Near East and Egypt (4)

Art 317A. Topics in Far Eastern Art: India (4)

Art 317B. Topics in Far Eastern Art: China (4)

Art 317C. Topics in Far Eastern Art: Japan (4)

Art 321. Renaissance Art (4)

May choose only one of the following:

Art 323. Native North American Art (4)

Anth 323. Native North American Art (4)

May choose only one of the following:

Art 324. Pre-Columbian Art (4)

Anth 324. Pre-Columbian Art (4)

Art 327. Baroque and Rococo Art (4)

Art 328. Mexican Art (4)

Art 329. Chicano Art (4)

Group C

Art 410. Studies in Art History: Renaissance (4)

Art 413. Modern Art of the United States (4)

Art 423. Nineteenth Century European Art (4)

Art 424. Modern European Art (4)

Any history course except History 395, 396, 399, 575, 589 and 595.

5. A minimum of eight units of electives to be chosen from:

Art 211. Visual Composition and Perception (2.5)

Art 212. Color and Light (2.5)

Art 213. Form in Space and Time (2.5)

Art 214. Methods and Materials (2.5)

Art 380. Communications Design I (5)

Art 390. Beginning Photography (5)

Comm 341. Introduction to Public Relations (4)

Geog 301. Cartography (4)

May choose only one of the following:

PA 380. Introduction to Public Administration (4)

PSci 380. Introduction to Public Administration (4)

PA 480. Organizational Problems in Public Administration (4)

COURSE OFFERINGS IN ANTHROPOLOGY (Anth)

Lower Division

100. Introduction to Anthropology: Human Evolution

Human biological and social evolution through time. (CAN ANTH 2) (4 units)

102. Introduction to Anthropology: Culture and Society

Structure and dynamics of human cultural experience; comparative analysis of language, religion, economic patterns and social and political organization in traditional and complex societies. (CAN ANTH 4) (4 units)

140. World Civilizations I, the Rise of Civilization

Activities and achievements of humans through the rise and diffusion of civilizations in Eurasia, Africa, and the Americas to about the dawn of the Christian era. (Also offered as History 140. Students may not receive credit for both.) Formerly Social Sciences 140. (4 units)

Upper Division

300. Archaeology

History of archaeological research, a survey of concepts and methods for the study of prehistoric culture and a summary of major sequences in prehistory. (4 units)

302. African Archaeology

Africa's past from the beginnings of humankind to the period of European contact. An examination of Africa's foremost role in the origins of culture and of anatomically modern humans, as well as the development of African civilizations. (4 units)

303. Prehistory of the Middle East and Europe

A survey of prehistory spanning the spread of people into the Middle East and Europe, the development of agriculture and the origins and growth of the earliest civilizations. (4 units)

305. North American Prehistory

Prehistory of North America from earliest times to the dawn of historic contact with the Old World after 1492. (4 units)

306. Aztecs, Maya and Their Predecessors

The origin, spread and decline of pre-Columbian civilizations in Mexico and adjacent areas. (4 units)

307. Incas and Their Predecessors

The origin, spread and decline of pre-Columbian civilizations in Peru and adjacent areas. (4 units)

312. Historical Archaeology

Use of archaeological methods to study historic peoples. Historical and archaeological methods and their results. Focus primarily on North America from A.D. 1492 to modern times. (Also offered as History 312. Students may not receive credit for both.) (4 units)

315. Archaeology of the Southwest and California

The prehistoric cultures of California and the American Southwest, their origins, characteristics and relationships. (4 units)

319. Experimental Archaeology and Ethnoarchaeology

Experimental and observational techniques that are important in reconstructing the past. This course has a practical/laboratory component that will assist students in understanding aspects of prehistoric technology and the formation of the archaeological record. *Prerequisite: consent of instructor.* (5 units)

320. Archaeological Survey and Excavation

Examines techniques and methods used to recover archaeological remains and information. Stresses the importance of research design and its relationship to methodology. Active participation in a field project under the direction of the instructor. Ten hours activity. *Prerequisite: consent of instructor.* (5 units)

321. Archaeological Laboratory Analysis

Examines techniques and methods used to analyze archaeological remains in the laboratory. Active participation in various laboratory projects under the direction of the instructor. Four hours lecture and three hours laboratory. *Prerequisite: consent of instructor.* (5 units)

323. Native North American Art

Art of American Indian and Eskimo peoples north of Mexico, from earliest prehistory to modern times. (Also offered as Art 323. Students may not receive credit for both.) (4 units)

324. Pre-Columbian Art

Art and architecture of pre-Columbian cultures with an emphasis on Mexico and Peru. (Also offered as Art 324. Students may not receive credit for both.) (4 units)

325. Human Variation and the Concept of Race

An inquiry into past and present interpretations of the significance of human physical differences. (4 units)

326. Human Origins

The archaeological, anatomical and other evidence for human origins examined within their geological and environmental contexts. Discussion of theories that attempt to explain how we became human. (4 units)

327. Primate Evolution and Ecology

A comparative study of our closest relatives (the apes, monkeys and other primates): their evolution, ecology, behavior, social organization and means of communication. (4 units)

330. Cross-Cultural Child-Rearing Practices

Cross-cultural examination of child-rearing practices from the perspective of major anthropological theories of personality formation and its relationship with culture. (4 units)

331. Anthropology of Human Development

A cross-cultural perspective on human development and the processes of personality formation and cultural transmission. (4 units)

332. Cross-Cultural Perspectives on Aging

A cross-cultural examination of aging and the roles, statuses, opportunities, and treatment of the aged, with an emphasis on non-Western societies. Formerly Anthropology 390N. (4 units)

333. Sex and Gender in Cross-Cultural Perspective

Examination and analysis of the changing position of women in selected societies around the world, including consideration of the sexual division of labor, marriage systems, male-female relations, and systems of myth and ideology concerning gender roles. (4 units)

335. Cross-Cultural Perspectives on Crime and Deviance

Cross-cultural examination of behavior regulation in human societies. Specific topics include cultural definition of crime and deviance, conflict resolution, processes of control and the distribution of authority and power. A self-paced version of this course (Anthropology 335S) is also available. Students may not receive credit for both. (4 units)

World Cultures (Anthropology 351-361)

Emphasis in the following courses is on major problems of current interest to the cultural anthropologist. Topics include general discussion of physical anthropology, language affiliations and culture, history of the area, the native populations, their relations with each other and to outside societies, and the effects of culture change upon them through time.

351. Indians of North America (4 units)

352. Indians of the Southwest (4 units)

354. Cultures of Mexico and Central America (4 units)

356. Cultures of South America (4 units)

357. African Societies (4 units)

358. Peoples of the Middle East (4 units)

360. Peoples of Australia (4 units)

361. Peoples of Micronesia, Melanesia and Polynesia (4 units)

375. Museum Methods

Introduction to the techniques of museum work, and to the history, theory and practice of museums. Includes curatorial methods, and the care, preservation, storage and exhibition of museum specimens. (4 units)

390. Selected Topics in Anthropology

An anthropological examination of a selected topic. May be repeated for credit as topics change. (4 units)

391. Selected Topics in Anthropology

An anthropological examination of a selected topic. May be repeated for credit as topics change. (2 units)

460. Language and Culture

Analysis of languages stressing the relationship of language to patterns of human behavior. (4 units)

466. Anthropology of Health, Illness and Healing

An anthropological examination of the varying cultural definitions, explanations and experiences of illness and health in a variety of cultures. Strategies which societies have developed to cope with disease and misfortune are investigated, including such things as shamanism and folk medicine. (4 units)

470. Culture Change and Dynamics

An examination and evaluation of the various theories that have been proposed to explain societal change using actual case study materials. (4 units)

475. Cultural Ecology

An examination of theories, methods and applications of the ecological perspective in the anthropological study of human cultures, and a cross-cultural comparison of adaptations to different ecological niches. (4 units)

480. Magic, Religion and Science

A comparative study of the widely varied attempts by members of human societies to order, control and make predictions about their physical and social environments. (4 units)

485. Applied Anthropology and Social Policy

Use of anthropological knowledge and methods in solving social problems in institutional, national and international settings. Includes consideration of policy-making, funding, sponsorship, establishing goals, project implementation, popular participation, ethics, evaluation and reporting. (4 units)

490. Systems of Social Organization

A comparative description and analysis of social integration in human societies. (4 units)

492. Economic Anthropology

An anthropological approach to the analysis of systems of production and exchange in nonindustrial societies. (4 units)

493. Urban Anthropology

Utilization of ethnographic and cross-cultural materials in an examination of anthropological concepts and methods for the study of urban environments and the processes of urbanization. (4 units)

500. Great Ideas in Anthropology

Major anthropological theories as applied to a topical area of anthropological study, such as human settlements, migrations, or innovation. Perspectives from cultural anthropology, archaeology, bioanthropology and linguistics will be discussed. *Prerequisite: consent of instructor.* (4 units)

575. Internship in Anthropology

Supervised work in public or private organizations (for example, museums) emphasizing practical applications of anthropological concepts. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and departmental approval of a written proposal submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

585. Fieldwork in Cultural Anthropology

Supervised design, execution and analysis of an individualized ethnographic field project. *Prerequisite: consent of instructor.* (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of eight units in Anthropology 595 may be applied toward graduation. Only four of those units may be applied to the major. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

597. Senior Honors Project

Original research in an area of anthropological studies, culminating in a major research report receiving approval of the anthropology faculty. Enrollment limited to students whose formal application for departmental honors is approved. (5 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

666. Cultural Resource Management

Study of cultural resources in the context of planning. Focus will be on data sources, environmental review and historic evaluation. (2 units)

695. Independent Graduate Study

Graduate-level independent study in anthropology for students in the program for the Master of Arts with special major or in other graduate programs. *Prerequisites: consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

ART

Accredited by the National Association of Schools of Art and Design

Department of Art

Visual Arts Building, Room 123B
880-5802

Bachelor of Arts

Art - Plan I
Art - Plan II
Art - Plan III
Art - Plan IV

Teaching Credential Program

Art - Plan I
Art - Plan II
Art - Plan IV

Minor

Art History
Studio Art

Certificate Program

Business Skills for the Artist

FACULTY: Leo Doyle, Mary Goodwin, Peter Holliday, Richard Johnston (Chair), Julius Kaplan, Sant-Subagh K. Khalsa, Roger Lintault, George McGinnis, Joe Moran, Bill Warehall, Don Woodford

The challenge for visual artists is to discover what is already there, to open up and probe what is inside and outside themselves and to find a means of giving it back to the whole world. It is this adventure which is the focus of the Department of Art.

A student may either major or minor in art, and eventually choose one or more specific areas of concentration. The choice is governed by the student's experiences with various media, concepts and techniques, but this is not a rigid choice as new interactions among these elements are constantly being developed.

Four plans are available for students working for the Bachelor of Arts in Art and two options are available for a minor in art. The studio areas of concentration currently offered are: ceramics, graphic design, drawing, glass, painting, photography, printmaking, sculpture, and wood-working and furniture design.

In addition to their courses in art, students are urged to seek electives in related areas of creative expression. Suggested possibilities include acting, creative writing and music.

Five-unit studio courses meet for eight scheduled hours per week and require an additional seven hours per week to be arranged on an individual basis. For 2 1/2-unit courses the requirements are five scheduled hours and 3 1/2 hours to be arranged. Field trips are required in most art history courses and several studio courses as well. Also, in many courses students are required to pay for materials used.

B.A. IN ART—PLAN I

Requirements (84 units)

This program is designed for students seeking a liberal education with an emphasis in art, and is recommended for those who wish to receive teaching credentials in art.

Requirements for the B.A. in Art—Plan I:

Lower-division requirements (32 units)

1. Art 210A. Western Art History: Prehistoric Times through the Middle Ages (4)
2. Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
3. Art 210C. Western Art History: Modern Art - 1750 to the Present (4)
4. Art 211. Visual Composition and Perception (2.5)
5. Art 212. Light and Color (2.5)
6. Art 213. Form in Space and Time (2.5)
7. Art 214. Methods and Materials (2.5)
8. Art 215. Basic Drawing (2.5)
9. Art 216. Life Drawing (2.5)
10. Art 217. Technical Drawing (2.5)
11. Art 218. Photo-Visual Concepts (2.5)

Upper-division requirements (52 units)

1. History of Art
Eight units chosen from:
 - Art 306. Greek and Roman Art (4)
 - Art 308. Medieval Art (4)
 - Art 310. Eastern Art History (4)
 - Art 311. Art of the United States to the End of the 19th Century (4)
 - Art 314. The Art of Indigenous Peoples (4)
 - Art 316. Arts of the Ancient Near East and Egypt (4)
 - Art 317A. Topics in Far Eastern Art: India (4)
 - Art 317B. Topics in Far Eastern Art: China (4)
 - Art 317C. Topics in Far Eastern Art: Japan (4)
 - Art 321. Renaissance Art (4)
 - Art 323. Native North American Art (4)
 - Art 324. Pre-Columbian Art (4)
 - Art 327. Baroque and Rococo Art (4)
 - Art 328. Mexican Art (4)
 - Art 329. Chicano Art (4)
 - Art 333. History of Graphic Design (4)
 - Art 359. History of Photography (4)
 - Art 410. Studies in Art History (4)
 - Art 413. Modern Art of the United States (4)
 - Art 423. Nineteenth Century European Art (4)
 - Art 424. Modern European Art (4)
 - Art 459. Contemporary Art Theory and Criticism (4)
 - Art 510. Colloquium in Art (4)
2. Studio courses in a single area of concentration
Twenty units chosen from one of the following groups (A, B, C, D, E or F): (Note: Check course descriptions to ascertain which courses may be repeated for credit.)
 - A. Art 304. Advanced Drawing and Life Drawing (5)

- Art 335. Painting I (5)
- Art 336. Advanced Painting (5)
- B. Art 340. Sculpture I (5)
- Art 341. Advanced Sculpture (5)
- C. Art 354. Ceramics I (5)
- Art 357. Advanced Ceramics (5)
- Art 375. Glass (5)
- D. Art 313. Printing Production (5)
- Art 360. Printmaking I (5)
- Art 361. Advanced Printmaking (5)
- E. Art 368. Woodworking and Furniture Design I (5)
- Art 369. Advanced Woodworking and Furniture Design (5)
- F. Art 390. Beginning Photography (5)
- Art 391. Intermediate Photography (5)
- Art 392. Advanced Photography (5)
- Art 393. Photographic Illustration and Design (5)
- 3. *Ten units, not duplicating the area of concentration, chosen from:*
 - Art 304. Advanced Drawing and Life Drawing (5)
 - Art 335. Painting I (5)
 - Art 338. Agency and Studio Skills (5)
 - Art 360. Printmaking I (5)
 - Art 390. Beginning Photography (5)
- 4. *Ten units, not duplicating the area of concentration, chosen from:*
 - Art 340. Sculpture I (5)
 - Art 354. Ceramics I (5)
 - Art 368. Woodworking and Furniture Design I (5)
 - Art 375. Glass (5)
 - Art 376. Jewelry and Metalsmithing (5)
- 5. Art 415. Senior Seminar: Art and Society (2)
- 6. Art 416. Senior Project (2)

B.A. IN ART—PLAN II

Requirements (89 units)

This program is designed for the student with a strong professional interest in art who may wish to pursue graduate studies.

Requirements for the B.A. in Art—Plan II:

Lower-division requirements (32 units)

- 1. Art 210A. Western Art History: Prehistoric Times through the Middle Ages (4)
- 2. Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
- 3. Art 210C. Western Art History: Modern Art - 1750 to the Present (4)
- 4. Art 211. Visual Composition and Perception (2.5)
- 5. Art 212. Light and Color (2.5)
- 6. Art 213. Form in Space and Time (2.5)
- 7. Art 214. Methods and Materials (2.5)
- 8. Art 215. Basic Drawing (2.5)
- 9. Art 216. Life Drawing (2.5)
- 10. Art 217. Technical Drawing (2.5)
- 11. Art 218. Photo-Visual Concepts (2.5)

Upper-division requirements (57 units)

1. History of Art

Eight units chosen from:

- Art 306. Greek and Roman Art (4)
- Art 308. Medieval Art (4)
- Art 310. Eastern Art History (4)
- Art 311. Art of the United States to the End of the 19th Century (4)
- Art 314. The Art of Indigenous Peoples (4)
- Art 316. Arts of the Ancient Near East and Egypt (4)
- Art 317A. Topics in Far Eastern Art: India (4)
- Art 317B. Topics in Far Eastern Art: China (4)
- Art 317C. Topics in Far Eastern Art: Japan (4)
- Art 321. Renaissance Art (4)
- Art 323. Native North American Art (4)
- Art 324. Pre-Columbian Art (4)
- Art 327. Baroque and Rococo Art (4)
- Art 328. Mexican Art (4)
- Art 329. Chicano Art (4)
- Art 333. History of Graphic Design (4)
- Art 359. History of Photography (4)
- Art 410. Studies in Art History (4)
- Art 413. Modern Art of the United States (4)
- Art 423. Nineteenth Century European Art (4)
- Art 424. Modern European Art (4)
- Art 459. Contemporary Art Theory and Criticism (4)
- Art 510. Colloquium in Art (4)

2. Studio courses in a single area of concentration

Thirty units chosen from one of the following groups (A, B, C, D, E or F): (Note: Check course descriptions to ascertain which courses may be repeated for credit.)

- A. Art 304. Advanced Drawing and Life Drawing (5)
- Art 335. Painting I (5)
- Art 336. Advanced Painting (5)
- B. Art 340. Sculpture I (5)
- Art 341. Advanced Sculpture (5)
- C. Art 354. Ceramics I (5)
- Art 357. Advanced Ceramics (5)
- Art 375. Glass (5)
- D. Art 313. Printing Production (5)
- Art 360. Printmaking I (5)
- Art 361. Advanced Printmaking (5)
- E. Art 368. Woodworking and Furniture Design I (5)
- Art 369. Advanced Woodworking and Furniture Design (5)
- F. Art 390. Beginning Photography (5)
- Art 391. Intermediate Photography (5)
- Art 392. Advanced Photography (5)
- Art 393. Photographic Illustration and Design (5)

3. *Fifteen units of studio electives, in at least two different areas not in the area of concentration, chosen from:*

- Art 313. Printing Production (5)
- Art 335. Painting I (5)
- Art 336. Advanced Painting (5)
- Art 338. Agency and Studio Skills (5)

- Art 340. Sculpture I (5)
- Art 341. Advanced Sculpture (5)
- Art 342. Graphic Design I (5)
- Art 354. Ceramics I (5)
- Art 357. Advanced Ceramics (5)
- Art 360. Printmaking I (5)
- Art 361. Advanced Printmaking (5)
- Art 368. Woodworking and Furniture Design I (5)
- Art 369. Advanced Woodworking and Furniture Design (5)
- Art 375. Glass (5)
- Art 376. Jewelry and Metalsmithing (5)
- Art 380. Communications Design I (5)
- Art 381A. Advanced Communications Design (5)
- Art 390. Beginning Photography (5)
- Art 391. Intermediate Photography (5)
- Art 392. Advanced Photography (5)
- Art 393. Photographic Illustration and Design (5)
- Art 396. New Genres (5)
- 4. Art 415. Senior Seminar: Art and Society (2)
- 5. Art 416. Senior Project (2)

B.A. IN ART—PLAN III

Requirements (81 units)

This program is designed for the student with a strong professional interest in art history or museum work who may wish to pursue graduate studies.

Requirements for the B.A. in Art—Plan III:

Lower-division requirements (27 units)

- 1. Art 210A. Western Art History: Prehistoric Times through the Middle Ages (4)
- 2. Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
- 3. Art 210C. Western Art History: Modern Art 1750 to the Present (4)
- 4. Art 211. Visual Composition and Perception (2.5)
- 5. Art 212. Light and Color (2.5)
- 6. Art 213. Form in Space and Time (2.5)
- 7. Art 214. Methods and Materials (2.5)
- 8. Art 215. Basic Drawing (2.5)
- 9. Art 218. Photo-Visual Concepts (2.5)

Upper-division requirements (54 units)

- 1. Art 415. Senior Seminar: Art and Society (2)
- 2. Art 416. Senior Project (2)
- 3. Art 510. Colloquium in Art (4)
- 4. Upper-division studio art courses

Ten units chosen from:

- Art 313. Printing Production (5)
- Art 335. Painting I (5)
- Art 336. Advanced Painting (5)
- Art 338. Agency and Studio Skills (5)
- Art 340. Sculpture I (5)
- Art 341. Advanced Sculpture (5)
- Art 342. Graphic Design I (5)
- Art 354. Ceramics I (5)
- Art 357. Advanced Ceramics (5)

- Art 360. Printmaking I (5)
- Art 361. Advanced Printmaking (5)
- Art 368. Woodworking and Furniture Design I (5)
- Art 369. Advanced Woodworking and Furniture Design (5)
- Art 375. Glass (5)
- Art 376. Jewelry and Metalsmithing (5)
- Art 390. Beginning Photography (5)
- Art 391. Intermediate Photography (5)
- 5. Art history
Twenty-four units consisting of four units chosen from each of the following six groups (A, B, C, D, E and F):
 - A. Art 306. Greek and Roman Art (4)
 - Art 308. Medieval Art (4)
 - Art 316. Arts of the Ancient Near East and Egypt (4)
 - B. Art 321. Renaissance Art (4)
 - Art 327. Baroque and Rococo Art (4)
 - C. Art 311. Art of the United States to the End of the 19th Century (4)
 - Art 423. Nineteenth Century European Art (4)
 - D. Art 328. Mexican Art (4)
 - Art 329. Chicano Art (4)
 - Art 413. Modern Art of the United States (4)
 - Art 424. Modern European Art (4)
 - E. Art 310. Eastern Art History (4)
 - Art 317A. Topics in Far Eastern Art: India (4)
 - Art 317B. Topics in Far Eastern Art: China (4)
 - Art 317C. Topics in Far Eastern Art: Japan (4)
 - F. Art 314. The Art of Indigenous Peoples (4)
 - Art 323. Native North American Art (4)
 - Art 324. Pre-Columbian Art (4)
- 6. Twelve units or three quarters of one foreign language or equivalent proficiency. (Students are strongly advised to learn French and German.)

B.A. IN ART—PLAN IV

Requirements (91 units)

This program is designed for students with a strong professional interest in graphic design.

Requirements for the B.A. in Art—Plan IV:

Lower-division requirements (32 units)

- 1. Art 210A. Western Art History: Prehistoric Times through the Middle Ages (4)
- 2. Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
- 3. Art 210C. Western Art History: Modern Art - 1750 to the Present (4)
- 4. Art 211. Visual Composition and Perception (2.5)
- 5. Art 212. Light and Color (2.5)
- 6. Art 213. Form in Space and Time (2.5)
- 7. Art 214. Methods and Materials (2.5)
- 8. Art 215. Basic Drawing (2.5)
- 9. Art 216. Life Drawing (2.5)
- 10. Art 217. Technical Drawing (2.5)
- 11. Art 218. Photo-Visual Concepts (2.5)

Upper-division requirements (59 units)

1. Art history

Four units chosen from:

- Art 306. Greek and Roman Art (4)
- Art 308. Medieval Art (4)
- Art 310. Eastern Art History (4)
- Art 311. Art of the United States to the End of the 19th Century (4)

- Art 314. The Art of Indigenous Peoples (4)

- Art 316. Arts of the Ancient Near East and Egypt (4)

- Art 317A. Topics in Far Eastern Art: India (4)

- Art 317B. Topics in Far Eastern Art: China (4)

- Art 317C. Topics in Far Eastern Art: Japan (4)

- Art 321. Renaissance Art (4)

- Art 323. Native North American Art (4)

- Art 324. Pre-Columbian Art (4)

- Art 327. Baroque and Rococo Art (4)

- Art 328. Mexican Art (4)

- Art 329. Chicano Art (4)

- Art 359. History of Photography (4)

- 2. Art 332. Graphic Design Principles (5)

- 3. Art 333. History of Graphic Design (4)

- 4. Art 338. Agency and Studio Skills (5)

- 5. Art 342. Graphic Design I (5)

- 6. Art 343. Graphic Design II (5)

- 7. Art 344. Graphic Design III (5)

- 8. Art 442. Graphic Design IV (5)

- 9. Art 443. Graphic Design V (5)

- 10. Elective studio courses not in area of concentration

Ten units chosen from:

- Art 313. Printing Production (5)

- Art 335. Painting I (5)

- Art 336. Advanced Painting (5)

- Art 340. Sculpture I (5)

- Art 341. Advanced Sculpture (5)

- Art 354. Ceramics I (5)

- Art 357. Advanced Ceramics (5)

- Art 360. Printmaking I (5)

- Art 361. Advanced Printmaking (5)

- Art 368. Woodworking and Furniture Design I (5)

- Art 369. Advanced Woodworking and Furniture Design (5)

- Art 375. Glass (5)

- Art 376. Jewelry and Metalsmithing (5)

- Art 390. Beginning Photography (5)

- Art 391. Intermediate Photography (5)

- Art 392. Advanced Photography (5)

- Art 393. Photographic Illustration and Design (5)

- Art 396. New Genres (5)

- 11. Art 415. Senior Seminar: Art and Society (2)

- 12. Mktg 305. Marketing Principles (4)

TEACHING CREDENTIAL PROGRAM

Students wishing to be recommended for a single-subject teaching credential may follow Plan I, II or IV of the art major and must take the following courses either within this major or as electives:

- 1. Art 335. Painting I
- 2. Art 338. Agency and Studio Skills
- 3. Art 340. Sculpture I
- 4. Art 354. Ceramics I
- 5. Art 360. Printmaking I
- 6. Art 368. Woodworking and Furniture Design I
- 7. Art 390. Beginning Photography
- 8. Art 499. Art Education: Methods and Materials (This course replaces Secondary Education 441. Secondary School Curriculum and Instruction II in the single subject credential requirements.)

MINOR IN ART HISTORY

Requirements (28 units)**Requirements for a minor in Art History:***Lower-division requirements (12 units)*

- 1. Art 210A. Western Art History: Prehistoric Times through the Middle Ages (4)
- 2. Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
- 3. Art 210C. Western Art History: Modern Art - 1750 to the Present (4)

Upper-division requirements (16 units)

Art history

Sixteen units chosen from:

- Art 306. Greek and Roman Art (4)
- Art 308. Medieval Art (4)
- Art 310. Eastern Art History (4)
- Art 311. Art of the United States to the End of the 19th Century (4)
- Art 314. The Art of Indigenous Peoples (4)
- Art 316. Arts of the Ancient Near East and Egypt (4)
- Art 317A. Topics in Far Eastern Art: India (4)
- Art 317B. Topics in Far Eastern Art: China (4)
- Art 317C. Topics in Far Eastern Art: Japan (4)
- Art 321. Renaissance Art (4)
- Art 323. Native North American Art (4)
- Art 324. Pre-Columbian Art (4)
- Art 327. Baroque and Rococo Art (4)
- Art 328. Mexican Art (4)
- Art 329. Chicano Art (4)
- Art 333. History of Graphic Design (4)
- Art 359. History of Photography (4)
- Art 410. Studies in Art History (4)
- Art 413. Modern Art of the United States (4)
- Art 423. Nineteenth Century European Art (4)

- Art 424. Modern European Art (4)
 Art 459. Contemporary Art Theory and Criticism (4)
 Art 510. Colloquium in Art (4)

In most cases, students who have completed the minor in art history and three quarters of a foreign language or equivalent proficiency can easily complete the requirements of a humanities major as well.

MINOR IN STUDIO ART

Requirements (37 units)

Requirements for a minor in Studio Art:

Lower-division requirements (27 units)

1. Art 210A. Western Art History: Prehistoric Times through the Middle Ages (4)
2. Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
3. Art 210C. Western Art History: Modern Art - 1750 to the Present (4)
4. Art 211. Visual Composition and Perception (2.5)
5. Art 212. Light and Color (2.5)
6. Art 213. Form in Space and Time (2.5)
7. Art 214. Methods and Materials (2.5)
8. Art 215. Basic Drawing (2.5)
9. Studio course

One lower-division course chosen from:

- Art 216. Life Drawing (2.5)
 Art 217. Technical Drawing (2.5)
 Art 218. Photo-Visual Concepts (2.5)

Upper-division requirements (10 units)

Studio courses

Ten units chosen from:

- Art 313. Printing Production (5)
 Art 335. Painting I (5)
 Art 336. Advanced Painting (5)
 Art 338. Agency and Studio Skills (5)
 Art 340. Sculpture I (5)
 Art 341. Advanced Sculpture (5)
 Art 342. Graphic Design I (5)
 Art 354. Ceramics I (5)
 Art 357. Advanced Ceramics (5)
 Art 360. Printmaking I (5)
 Art 361. Advanced Printmaking (5)
 Art 368. Woodworking and Furniture Design I (5)
 Art 369. Advanced Woodworking and Furniture Design (5)
 Art 375. Glass (5)
 Art 376. Jewelry and Metalsmithing (5)
 Art 390. Beginning Photography (5)
 Art 391. Intermediate Photography (5)

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Business Skills for the Artist

Certificate Requirements (32 units)

1. Acct 211. Principles of Accounting I (4)
2. Mgmt 442. Small Business Management (4)
3. Mktg 305. Marketing Principles (4)
4. Twenty units of upper-division studio art courses chosen in consultation with an advisor.

COURSE OFFERINGS IN ART (Art)

Lower Division

200. Studies in Art

Exploration of the form and content of art. Emphasis on understanding and appreciating painting, sculpture, architecture and other art media. May not be counted toward fulfilling requirements in the art major. (4 units)

210. Western Art History

Development of Western art and its historical context. May be repeated for credit as topics change.

- A. Prehistoric Times through the Middle Ages (CAN ART SEQ A) (4 units)
- B. Renaissance, Baroque and Rococo (CAN ART SEQ A) (4 units)
- C. Modern Art - 1750 to the Present (CAN ART SEQ A) (4 units)

211. Visual Composition and Perception

An introduction to two-dimensional theory, materials, and techniques. Five hours of studio time per week. Formerly Art 201. (2.5 units)

212. Color and Light

Theory and effect of color and light and their creative use in visual art and design. Five hours of studio time per week. Formerly Art 201. (2.5 units)

213. Form in Space and Time

Introduction to three-dimensional theory and techniques. Materials fee required. Five hours of studio time per week. Formerly Art 203. (2.5 units)

214. Methods and Materials

Investigation of materials used in the development of three dimensional form, such as clay, metal, and wood. Materials fee required. Five hours of studio time per week. Formerly Art 203. (2.5 units)

215. Basic Drawing

Introduction to techniques of drawing for the purposes of creative expression related to object placement in space. Materials fee required. Five hours of studio time per week. Formerly Art 204. (2.5 units)

216. Life Drawing

Introduction to techniques of drawing for purposes of creative expression related to figure placement in space. Materials fee required. Five hours of studio time per week. Formerly Art 204. *Prerequisite: Art 215 or consent of instructor.* (2.5 units)

217. Technical Drawing

Introduction to mechanical and technical tools and materials for developing two-dimensional and three-dimensional schematic drawing. Materials fee required. Five hours of studio time per week. (2.5 units)

218. Photo-Visual Concepts

Principles of photographic vision, language, and aesthetics with an introduction to basic techniques and processes. Materials fee required. Five hours of studio time per week. (2.5 units)

220. Drafting and Mechanical Drawing for Artists

Fundamentals of drafting including schematic drawing of two- and three-dimensional objects, lettering, diagrammatical layouts, elevations, and perspective. Materials fee required. (5 units)

Upper Division**301. Topics in Studio Art for Non-Majors**

Introduction to and experimentation in selected areas of art. Not open to art majors. May be repeated for credit as topics change. Materials fee required. (2.5 units)

302. Topics in Studio Art for Non-Majors

Introduction to and experimentation in selected areas of art. Not open to art majors. May be repeated for credit as topics change. (5 units)

304. Advanced Drawing and Life Drawing

Further exploration in techniques of drawing for purposes of creative expression. A maximum of 25 units may be applied toward the major. *Prerequisites: Art 215 and 216 (or 204) or consent of instructor.* (5 units)

306. Greek and Roman Art

Architecture, sculpture, painting and decorative arts of ancient Greece and Rome. (4 units)

308. Medieval Art

Art and architecture of Europe from the eighth through the thirteenth centuries. (4 units)

310. Eastern Art History

Development of Eastern art and its historical context. (4 units)

311. Art of the United States to the End of the 19th Century

Development of American art from the Colonial period to c. 1900. Significant examples from the fields of architecture, sculpture, painting and the decorative arts. (4 units)

313. Printing Production

Foundation of printing production including procedures for operating a two-color offset press and related tools and equipment. Materials fee required. (5 units)

314. The Art of Indigenous Peoples

Art of the native cultures of Africa, the South Pacific and North America; post-conquest and contemporary folk art in Central and South America. (4 units)

316. Arts of the Ancient Near East and Egypt

History and development of the architecture, sculpture and decorative arts of the Ancient Near East and Egypt. (4 units)

317. Topics in Far Eastern Art

History and development of styles of Eastern art from pre-historic times.

A. India (4 units)

B. China (4 units)

C. Japan (4 units)

321. Renaissance Art

Art and architecture of northern and southern Europe in the 15th and 16th centuries. (4 units)

323. Native North American Art

Art of American Indian and Eskimo peoples north of Mexico, from earliest prehistory to modern times. (Also offered as Anthropology 323. Students may not receive credit for both.) (4 units)

324. Pre-Columbian Art

Art and architecture of pre-Columbian cultures with an emphasis on Mexico and Peru. (Also offered as Anthropology 324. Students may not receive credit for both.) (4 units)

327. Baroque and Rococo Art

Art and architecture of seventeenth and eighteenth century Europe. (4 units)

328. Mexican Art

Art and architecture of Mexico from the Conquest to the present. (4 units)

329. Chicano Art

Art and culture of Mexican Americans. (4 units)

332. Graphic Design Principles

Introduction to basic procedures used by graphic designers, including techniques of problem solving, presentation, typography, layout and graphic arts darkroom practices, composition and comprehensive skills. Materials fee required. *Prerequisites: Art 211, 212, 213, 214, 215, 216, and 218 or consent of instructor.* (5 units)

333. History of Graphic Design

Development of graphic communication from pictographs to contemporary design. (4 units)

335. Painting I

Pictorial functions of formal elements of picture-making such as line, plane, color and light, pattern and edge. Two hours lecture and six hours laboratory. *Prerequisites:* Art 211, 212, 215 and 216 (or 201 and 204). (5 units)

336. Advanced Painting

Advanced work in painting. May be repeated for credit. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisite:* Art 335 (or 201, 204) or consent of instructor. (5 units)

338. Agency and Studio Skills

Workshop in the fundamentals of pre-press and printing production including paste-up, mechanical preparations, and studio skills. Materials fee required. *Prerequisite:* Art 332 or consent of instructor. (5 units)

340. Sculpture I

Approaches to sculpture using a variety of materials, tools, processes and concepts. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisites:* Art 213 and 214 (or 203) or consent of instructor. (5 units)

341. Advanced Sculpture

Advanced work in sculpture. May be repeated for credit. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisite:* Art 340. (5 units)

342. Graphic Design I

Fundamentals and principles of typographic design. An examination of the different elements of typography. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisite:* Art 338 (or 201, 203) or consent of instructor. (5 units)

343. Graphic Design II

Principles of photography, illustration, collage and typography applied to posters, games, book covers, magazines, point-of-purchase displays, and promotional materials. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisite:* Art 342 or consent of instructor. (5 units)

344. Graphic Design III

Design principles as applied to regional and national, corporate and retail environments. Covers the interactions between business people and designers and the realities of planning, marketing, and strategic positioning of both company and product. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisites:* Art 343 and consent of instructor. (5 units)

345. Gallery Management

Fine art gallery practices including installation, packing and crating, special event coordination and conduct. Preparation of publications and publicity, art handling and security. May be repeated for credit with consent of instructor. (2 units)

354. Ceramics I

Procedures of hand building, throwing, slip casting and glazing as practiced by the studio potter and the ceramic sculptor. Materials fee required. (5 units)

357. Advanced Ceramics

Advanced work in ceramics. May be repeated for credit. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisites:* Art 213, 214 (or 203) and 354 or consent of instructor. (5 units)

359. History of Photography

Development of the technology and aesthetics of photography. (4 units)

360. Printmaking I

Creative research into studio techniques in relief, intaglio, callographic, planographic and stencil processes. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisites:* Art 211, 212, 215 and 216 (or 201 and 204). (5 units)

361. Advanced Printmaking

Advanced work in printmaking. May be repeated for credit. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisite:* Art 360. (5 units)

365. Directed Studio Problems

Beginning to intermediate study and experimentation in a selected area of art. May be repeated for credit. Materials fee required. *Prerequisite:* consent of instructor. (Credit to be arranged: 1 to 2 units)

368. Woodworking and Furniture Design I

Explorations in the use of hand and power tools in woodworking. Materials fee required. (5 units)

369. Advanced Woodworking and Furniture Design

Advanced work in woodworking and furniture design. May be repeated for credit. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisite:* Art 368. (5 units)

375. Glass

Techniques of blown, stained, molded, neon and flame glass used in the formation of functional and sculptural objects. May be repeated for credit. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisites:* Art 213 and 214 (or 203) or consent of instructor. (5 units)

376. Jewelry and Metalsmithing

Design and fabrication of jewelry and hollowware including the techniques of bending, forming, soldering and casting. May be repeated for credit. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisites:* Art 213 and 214 (or 203) or consent of instructor. (5 units)

380. Communications Design I

Design concepts as applied to visual communication, including graphic design and layout, packaging, corporate identity, symbology, display and environmental graphics. Materials fee required. Two hours lecture and six hours laboratory. *Prerequisites:* Art 201 and 203 or consent of instructor. (5 units)

381. Advanced Communications Design

Advanced work in communications design. May be repeated for credit. Materials fee required. *Prerequisite:* Art 380 or consent of instructor.

A. Two hours lecture and six hours laboratory. (5 units)

B. One hour lecture and three hours laboratory. (2.5 units)

386. Audio and Video Media

Introduction to the theories and techniques governing the use of video, photographic and audio-recording equipment in graphic production. (4 units)

390. Beginning Photography

Creative research in the study of photography, to include content, design, technique and individual problems. Two hours lecture and six hours laboratory. Formerly Art 383. Materials fee required. (5 units)

391. Intermediate Photography

Intermediate research in photography with an emphasis on process and technique, visual aesthetics and communication, and personal expression. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisite: Art 390 (or 383) or consent of instructor.* (5 units)

392. Advanced Photography

Advanced work in photography. May be repeated for credit with a maximum of 20 units applied toward the major (units earned in Art 384 may be counted towards the 20 units). Two hours lecture and six hours laboratory. Materials fee required. *Prerequisites: Art 211, 212 (or 201), 390 (or 383), and 391 or consent of instructor.* (5 units)

393. Photographic Illustration and Design

Fundamentals of commercial photography and composition. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisite: Art 390 (or 383).* (5 units)

395. Art in the Classroom

Providing art experiences through the use of varied art media in the elementary school. May not be counted toward fulfilling requirements in the art major. Two hours lecture and four hours laboratory. Materials fee required. (4 units)

396. New Genres

Creative research and experimentation in contemporary artistic expression including installation art, performance art, and video art. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisites: Art 211, 212, 213 and 214 (201 and 203) or consent of instructor.* (5 units)

410. Studies in Art History

Study in a selected period or topic in the history of art. May be repeated for credit as topics change. (4 units)

413. Modern Art of the United States

Art in America in the 20th century. (4 units)

415. Senior Seminar: Art and Society

The theoretical and practical roles of art, artists and their audience through history to the present. Formerly Art 515. *Prerequisite: senior standing in Department of Art or consent of instructor.* (2 units)

416. Senior Project

Preparation of a senior project in the student's area of concentration. Documentation of project is required. Formerly Art 515. *Prerequisite: senior standing in Department of Art or consent of instructor.* (2 units)

423. Nineteenth Century European Art

Art of the 19th-century Europe; from neo-Classicism through post-Impressionism. (4 units)

424. Modern European Art

Twentieth-century art and architecture in Europe from 1900 to the present. (4 units)

442. Graphic Design IV

Advanced corporate identity, including logo and trademark design and related applications. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisite: Art 344 or consent of instructor.* (5 units)

443. Graphic Design V

Design and portfolio workshop: design of graphics for television and motion pictures; workshop in resume preparation, development of job objectives, mock interviews, and the construction of a portfolio. Two hours lecture and six hours laboratory. Materials fee required. *Prerequisite: Art 442 or consent of instructor.* (5 units)

459. Contemporary Art Theory and Criticism

Study of theories influencing artists and art criticism today. (4 units)

483. Studies in Studio Art

Study and experimentation in a selected area of art. May be repeated for credit as topics change. Materials fee required. *Prerequisites: Art 211, 212, 213, 214, 215, 216, 217, 218 (or 201, 203 and 204) or consent of instructor.* (5 units)

484. Studies in Studio Art

Study and experimentation in a selected area of art. May be repeated for credit as topics change. Materials fee required. *Prerequisites: Art 211, 212, 213, 214, 215, 216, 217, 218 (or 201, 203 and 204) or consent of instructor.* (2.5 units)

499. Art Education: Methods and Materials

The teaching methods, materials and curriculum of art programs K-12. Must be taken prior to student teaching in art. Formerly Humanities 499A. Materials fee required. *Prerequisite: open only to art majors of at least junior status.* (4 units)

510. Colloquium in Art

Inquiry into problems of art history, aesthetics and art criticism. May be repeated for credit. *Prerequisite: consent of instructor.* (4 units)

575. Internship

Supervised work in a private or public setting which provides professional experience in the field of art. May be repeated for a maximum of 10 units in the major. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 to 5 units)

595. Independent Study

Studio and/or library research conducted under the direction of a faculty member. May be repeated for credit. Materials fee required. *Prerequisites: a minimum overall ji of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

BILINGUAL/CROSS-CULTURAL STUDIES

The courses listed below are intended to be used by students who wish to complete simultaneously the Bachelor of Arts in Liberal Studies (see Page 211) and the requirements for the multiple subject credential with the bilingual/cross-cultural option (see Page 143). For further information concerning credential programs, contact the School of Education.

The university offers a certificate in bilingual/cross-cultural studies: Spanish/English. For further information, see Page 297.

- Anth 330. Cross-Cultural Child-Rearing Practices (4)
- Anth 354. Cultures of Mexico and Central America (4)
- Anth 356. Cultures of South America (4)
- Anth 460. Language and Culture (4)
- Art 328. Mexican Art (4)
- EELB 536. Teaching in a Multicultural Society (4)
- FLan 320. Masterpieces of Literature (4)
- Hist 390. History of Modern Mexico (4)
- Hist 391. Chicano History (4)
- Hist 470. Modern Latin America (4)
- IS 460. Aspects of Chicano Culture (4)
- Mus 351. Latin American Music (4)
- Span 101. College Spanish I (4)
- and
- Span 102. College Spanish II (4)
- Span 150. Intermediate Spanish (4)
- Span 312. Techniques for Professional Interpreting and Translating in Spanish (4)
- Span 314. Advanced Conversation (4)
- Span 316. Spanish for the Professions (4)
- Span 400. Masterpieces in Spanish and Spanish American Literature (4)
- Span 402. Advanced Composition (4)
- Span 440. Mexican Literature (4)
- Span 514. Seminar in Hispanic Language, Literature or Film (4)

BIOLOGY

Department of Biology

Biological Sciences Building, Room 217
880-5305

Bachelor of Arts

Biology

Bachelor of Science

Biology

Teaching Credential Program

Single Subject

Minor

Biology

Master of Science

Biology

(Degree requirements can be found on Page 326.)

FACULTY: Nicole Bournias, Klaus Brasch, Herbert Brunkhorst, Marilyn Cruz-Alvarez, Richard Fehn (Acting Chair), James Ferrari, Dalton Harrington (Emeritus), Michael Loik, Sarojam Mankau (Emeritus), David Polcyn, Alexander Sokoloff (Emeritus), Stuart Sumida, Jeffrey Thompson, Ching-Hua Wang, Ruth Wilson

The major in biology emphasizes the relationship between structure and function in living systems and the concept that biological processes can be studied at different levels of organization. The program provides a balanced blend of traditional and modern biology, incorporating the important generalizations of traditional biology and the more recent advances essential to the successful biologist or medical practitioner of the future.

The excellent facilities and equipment of the department are readily available to all students enrolled in biology courses. Qualified seniors are encouraged to engage in research projects through the independent study program.

Many career opportunities are available to the student majoring in biology. The undergraduate program provides an excellent background for further work in medicine, dentistry, veterinary medicine and graduate programs. It can also serve for entry into a career in education, industry and governmental organizations.

Field trips are a normal and required part of a number of courses.

Preprofessional students of medicine, dentistry or other science-based fields seeking a major in biology should refer to Page 64 of this catalog and consult with a departmental advisor.

B.A. IN BIOLOGY

Requirements (86 - 91 units)

Requirements for the B.A. in Biology:

1. Biol 200. Biology of the Cell (5)
2. Biol 201. Biology of Organisms (5)

3. Biol 202. Biology of Populations (5)
4. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
5. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)

6. Organic chemistry

A minimum of twelve units chosen from Group A or B below:

Group A:

- Chem 221. Organic Chemistry I (4)
- Chem 222. Organic Chemistry II (4)
- Chem 223. Organic Chemistry III (4)

Group B:

- Chem 321. Principles of Organic Chemistry I (5)
- Chem 322. Principles of Organic Chemistry II (5)
- Chem 323. Principles of Organic Chemistry III (5)

Note: The requirement in organic chemistry may be met by the completion of one year of transferable organic chemistry course work from another institution of higher education.

7. Four units chosen from:

- Math 192. Methods of Calculus (4)
- Math 211. Basic Concepts of Calculus (4)

8. Physics

A minimum of thirteen units chosen from Group A or B below:

Group A:

- Phys 121. Basic Concepts of Physics I (5)
- Phys 122. Basic Concepts of Physics II (4)
- Phys 123. Basic Concepts of Physics III (4)

Group B:

- Phys 221. General Physics I (5)
- Phys 222. General Physics II (5)
- Phys 223. General Physics III (5)

9. Biol 300. Cellular Physiology (5)
10. Biol 421. Genetics (4)
11. Biol 422. Genetics Laboratory (1)
12. A minimum of 20 units of upper-division elective course work in biology.

B.S. IN BIOLOGY

Requirements (114 - 119 units)

Requirements for the B.S. in Biology:

1. Biol 200. Biology of the Cell (5)
2. Biol 201. Biology of Organisms (5)
3. Biol 202. Biology of Populations (5)
4. *A minimum of 53 units of upper-division biology courses to include each of the following:*
 - A. Biol 300. Cell Physiology (5)
 - B. Biol 400. Molecular Biology (6)
 - C. Biol 421. Genetics (4)
 - Biol 422. Genetics Laboratory (1)
 - D. Biol 450. Ecology (5)

E. *Either Group 1 or 2 below:*

Group 1:

- Biol 354. Biology of Higher Plants (6)
 Biol 424. Comparative Animal Physiology (6)

Group 2:

- Biol 431. Comparative Plant Physiology (6)
 Biol 342. Biology of the Chordates (6)
 or
 Biol 331. Biology of the Invertebrates (6)

F. A minimum of 20 units of upper-division elective course work in biology.

5. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
 6. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)

7. *Five units chosen from:*

- Chem 245. Modern Quantitative Analysis (5)
 Chem 436. Biochemistry I (5)

8. Organic chemistry

A minimum of twelve units chosen from Group A or B below:

Group A:

- Chem 221. Organic Chemistry I (4)
 Chem 222. Organic Chemistry II (4)
 Chem 223. Organic Chemistry III (4)

Group B:

- Chem 321. Principles of Organic Chemistry I (5)
 Chem 322. Principles of Organic Chemistry II (5)
 Chem 323. Principles of Organic Chemistry III (5)

Note: The requirement in organic chemistry may be met by the completion of one year of transferable organic chemistry course work from another institution of higher education.

9. *Four units chosen from:*

- Math 192. Methods of Calculus (4)
 Math 211. Basic Concepts of Calculus (4)

10. Physics

A minimum of thirteen units chosen from Group A or B below:

Group A:

- Phys 121. Basic Concepts of Physics I (5)
 Phys 122. Basic Concepts of Physics II (4)
 Phys 123. Basic Concepts of Physics III (4)

Group B:

- Phys 221. General Physics I (5)
 Phys 222. General Physics II (5)
 Phys 223. General Physics III (5)

TEACHING CREDENTIAL PROGRAM

Students wishing to be recommended for a single subject teaching credential in life science must demonstrate subject matter competence as assessed by the Biology Department faculty, and must have completed either a bachelor of arts or bachelor of science degree program in biology with a minimum of 15 units of lower-division core

biology, and a minimum of 30 units of upper-division biology to include:

1. Plant Biology

A minimum of five units chosen from:

- Biol 319. Local Flora (5)
 Biol 353. Biology of Lower Plants (5)
 Biol 354. Biology of Higher Plants (6)
 Biol 360. Functional Anatomy of Plants (5)

2. Animal Biology (Zoology)

A minimum of five units chosen from:

- Biol 331. Biology of Invertebrates (6)
 Biol 335. Entomology (5)
 Biol 342. Biology of the Chordates (6)
 Biol 371. Parasitology (5)

3. Aquatic and Terrestrial Ecology

- Biol 450. Ecology (5)

4. Human Biology and Development

A minimum of four units chosen from:

- Biol 306. Human Heredity and Development (4)
 Biol 314. Biology of Human Sexuality (4)

5. Physiology

A minimum of five units chosen from:

- Biol 300. Cell Physiology (5)
 Biol 424. Comparative Animal Physiology (6)
 Biol 431. Comparative Plant Physiology (6)

6. Genetics

- Biol 421. Genetics (4)

and

- Biol 422. Genetics Laboratory (1)

A course may not count in two categories and a minimum of three laboratory courses must be selected.

All Single Subject Waiver programs are being reviewed and may be revised due to changes in Statewide requirements. Students who declare the B.A. or B.S. in Biology after January 1995 and who wish to eventually be recommended for acceptance into the teaching credential program must follow the new requirements available in the Biology Department Office.

MINOR IN BIOLOGY

Requirements (56 units)

Requirements for a minor in Biology:

- Biol 200. Biology of the Cell (5)
- Biol 201. Biology of Organisms (5)
- Biol 202. Biology of Populations (5)
- Chem 206. Fundamentals of Chemistry II: Organic Chemistry (5)
- Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
- Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
- Four units chosen from:*
 - Math 120. Pre-Calculus Mathematics (4)
 - Math 192. Methods of Calculus (4)
 - Math 211. Basic Concepts of Calculus (4)
- Physics
 - Five units chosen from:*
 - Phys 100. Physics in the Modern World (5)

- Phys 121. Basic Concepts of Physics I (5)
 Phys 221. General Physics I (5)
 9. A minimum of fifteen upper-division units (3 courses) in biology, which must include at least one laboratory-based course.

HONORS IN BIOLOGY

Candidacy for departmental honors in biology is voluntary. To be eligible a student must fulfill the following requirements:

1. Achieve a minimum GPA of 3.5 for all courses satisfying the requirements for the major (as defined above);
2. Take at least five courses in the major at this university;
3. Satisfactorily complete Biology 595. Independent Study;
4. Satisfactorily complete the departmental comprehensive examination.

Application for candidacy must be made at the beginning of the senior year. Approval of candidacy and of the project and project advisor rests with the department. The project advisor will have sole responsibility for acceptance of the completed project.

The department may grant honors to exceptional students who fail to meet the above requirements, but who have in the judgment of the department brought distinction upon themselves and the department in some other appropriate manner.

COURSE OFFERINGS IN BIOLOGY (Biol)

Lower Division

100. Topics in Biology

Provides a broad understanding of biology, our molecular-organismic-ecological heritage and humankind's place within the biosphere. Four hours lecture and three hours laboratory. (5 units)

200. Biology of the Cell

Provides basic understanding of the process of life and the universality of life processes at the molecular and cellular level. Four hours lecture and three hours laboratory. A strong background equivalent to one year each of high school biology and chemistry is highly recommended. *Prerequisite: satisfactory score on the Entry Level Mathematics examination.* (CAN BIOL SEQ A) (5 units)

201. Biology of Organisms

Provides basic understanding of the functional attributes of organisms and their diversity. Includes examination of their comparative and evolutionary relationships. Four hours lecture and three hours laboratory. *Prerequisite: Biology 200.* (CAN BIOL SEQ A) (5 units)

202. Biology of Populations

Provides a basic understanding of the principles of genetics, evolution and ecology of organisms, populations, and communities. Four hours lecture and three hours laboratory. *Prerequisite: Biology 201.* (CAN BIOL SEQ A) (5 units)

216. Genetics and Society

Technological advances in human genetics and their impact on society. Biological and ethical perspectives of the application of genetic research. Two hours lecture. (2 units)

217. Biology of Sexually Transmitted Diseases

The pathogenesis, biology of the agent, treatment and diagnosis of the prominent sexually transmitted diseases. Impact of current biotechnology in relation to vaccine development, experimental treatments, and improved diagnostics and screening. Two hours lecture. (2 units)

220. Principles of Microbiology

Morphology, physiology and classification of bacteria, fungi and viruses. Microbiology of air, soil and dairy products; rudiments of infection and immunity. Laboratory training in culture preparation, sterilization, inoculation and identification. Four hours lecture and three hours laboratory. *Prerequisite: one lower-division biology course.* (CAN BIOL 14) (5 units)

223. Human Physiology and Anatomy I

Comprehensive study of human form and function including living chemistry, cells, tissues, skeletal, muscular and nervous systems. Four hours lecture and three hours laboratory. *Prerequisite: one lower-division biology course.* (CAN BIOL SEQ B) (5 units)

224. Human Physiology and Anatomy II

Continuation of Biology 223 with coverage of special senses, digestive, respiratory, cardiovascular, urinary, endocrine and reproductive systems. Four hours lecture and three hours laboratory. *Prerequisite: Biology 223.* (CAN BIOL SEQ B) (5 units)

250. Biology of Ecosystems

Survey of the hereditary and environmental factors that influence the survival and reproduction of the organisms that compose the dynamic ecosystems of planet Earth with a consideration of evolution and extinction. Four hours lecture and three hours laboratory. (5 units)

251. Readings in Ecosystem Biology

Selected assigned readings in ecosystem biology. For students formally enrolled in the University Honors Program and in Biology 250. One hour of discussion. *Prerequisite or corequisite: Biology 250.* Must be completed within two quarters of having completed Biology 250. (1 unit)

Upper Division

300. Cell Physiology

Study of cell properties, organization and activities; consideration of structure-function relationships of cellular membranes, the cell surface and cytoskeletal elements; metabolism of cell growth, maturation, specialized function and reproduction. Four hours lecture and three hours laboratory. *Prerequisite:*

sites: *Biology 200, 201 and 202*. Recommended: concurrent enrollment in organic chemistry (Chemistry 221 or 321). (5 units)

301. Biology in the Classroom

A comprehensive survey of the design and function of living organisms, from the cellular through the ecosystem levels as these relate to instruction in the elementary and middle school classroom. Unifying concepts such as evolution, energetics and the chemical nature of life will be stressed throughout. Three hours lecture and three hours laboratory. This course does not satisfy any requirements for the B.A. or B.S. major in Biology. (4 units)

306. Human Heredity and Development

Introductory course in human development. Emphasis on the principles of heredity as they apply to normal human developmental sequences from fertilization to adolescence. Birth defects related to hereditary, and drug or other environmental factors will illustrate how developmental sequences can be modified before birth. Formerly Biology 315 and 316. *Prerequisite: one lower-division biology course*. (4 units)

314. Biology of Human Sexuality

Biological aspects of human anatomy, physiology and behavior as related to sexual reproduction including discussion of fertility, pregnancy, childbirth and birth control; consideration also given to homosexuality, sexually transmitted diseases, sexual intercourse and response. Four hours lecture. *Prerequisite: one lower-division biology course*. (4 units)

319. Local Flora

Identification of the flora and ecological communities of southern California with a consideration of taxonomic principles. Field collections, four hours lecture and three hours laboratory. *Prerequisite: one lower-division biology course*. (5 units)

320. Microorganisms

Study of microbial organisms: their cell structure and function, metabolism, genetics and ecology with an introduction to bacterial, viral, fungal and protozoan pathogens. Four hours lecture and six hours laboratory. Formerly Biology 470. *Prerequisite: Biology 200*. (6 units)

321. Evolution

Darwin, views of evolution and their implications in various disciplines. Four hours lecture. *Prerequisites: Biology 200, 201 and 202*. (4 units)

331. Biology of the Invertebrates

The evolution and ecology of the invertebrate phyla with emphasis on major phylogenetic changes. Field collections, four hours lecture and six hours laboratory. *Prerequisite: Biology 100, 201 or 202*. (6 units)

335. Entomology

A study of the evolution, anatomy, classification and habits of insects and related arthropods. Field collections, four hours lecture and three hours laboratory. *Prerequisite: Biology 100, 201 or 202*. (5 units)

340. Comparative Embryology

Descriptive survey of developmental patterns of tissue and organ formation to include studies of echinoderms, insects, and amphibian, avian, marsupial and mammalian vertebrate embryology. Three hours lecture and three hours laboratory. *Prerequisite: Biology 201 or a course in anatomy and physiology*. (4 units)

342. Biology of the Chordates

Structural, physiological and ecological changes in the evolution of the chordate groups with an emphasis on comparative vertebrate anatomy. Four hours lecture and six hours laboratory. *Prerequisites: Biology 200, 201 and 202*. (6 units)

353. Biology of Lower Plants

Evolution, morphology and physiology of lower plants. Four hours lecture and three hours laboratory. *Prerequisites: Biology 200, 201 and 202*. (5 units)

354. Biology of Higher Plants

Comparative morphology of ferns, fern allies and seed plants, with a consideration of their phylogenetic relationships. Four hours lecture and six hours laboratory. *Prerequisites: Biology 200, 201 and 202*. (6 units)

360. Functional Anatomy of Plants

Tissues and tissue aggregates in vascular plants, stressing the functional attributes of structure, with laboratory study of living and preserved plant material and prepared slides. Four hours lecture and three hours laboratory. *Prerequisites: Biology 200, 201 and 202*. (5 units)

370. Symbiosis

The nature and principles of biological interactions with a survey of various types of relationships such as commensalism, mutualism, parasitism and competition. Four hours lecture. *Prerequisites: Biology 200, 201 and 202*. (4 units)

371. Parasitology

Study of the nature and principles of parasitism with a survey of various groups of animal parasites. Four hours lecture and three hours laboratory. *Prerequisites: Biology 200, 201 and 202*. (5 units)

380. Medical and Economic Botany

Survey of medically and economically important plant species and families. Includes plants harmful and beneficial to humans, with emphasis on vascular species. Four hours lecture. *Prerequisites: Biology 200, 201 and 202*. (4 units)

390. Biology Seminar

Topics of current biological interest, presented by students, faculty, and guest speakers. May be taken once for credit toward the major. Lecture only. Graded credit/no credit. *Prerequisites: Biology 200, 201, 202 and 300*. (1 unit)

396. Directed Study

Reading and library research in an area of biology conducted under the direction of a faculty member in the department of biology. No more than two units may be applied toward a biology elective for graduation. Graded credit/no credit. *Prerequisites: consent of instructor and departmental approval of a written proposal submitted on a standard application form filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 2 units)

400. Molecular Biology

A basic course in molecular biology with emphasis on informational macromolecules and how they direct molecular processes in both eukaryotic and prokaryotic cells. Four hours lecture and six hours laboratory. *Prerequisites: Biology 200, 201, 202, 300 and Chemistry 223 or 323.* (6 units)

402. Genetic Engineering

A basic course on recombinant DNA technology, concentrating on major DNA manipulation methods, use of vectors, genetic probes, construction of libraries, transgenic animals, plant genetic engineering and ethical and safety considerations. Lecture only. *Prerequisites: Biology 300, 400 and Chemistry 223 or 323.* Recommended: Biology 400. (4 units)

421. Genetics

Principles of classical and modern genetics including an introduction to population genetics. Formerly Biology 423. Four hours lecture. Concurrent enrollment in Biology 422 is recommended. *Prerequisites: Biology 200, 201, 202 and 300.* (4 units)

422. Genetics Laboratory

Laboratory experiments with *Drosophila melanogaster* to demonstrate Mendelian principles of inheritance, linkage mapping and determination of linkage groups to which a gene belongs. Formerly Biology 423. Three hours laboratory. *Prerequisite or corequisite: completion of or concurrent enrollment in Biology 421.* (1 unit)

424. Comparative Animal Physiology

A comparative analysis of the physiological mechanisms and processes of organisms with emphasis on trends of evolutionary specialization. Four hours lecture and six hours laboratory. *Prerequisites: Biology 200, 201, 202, 300 and Chemistry 223 or 323.* Recommended: Biology 331 or 342. (6 units)

428. Concepts of Molecular Genetics

Chemical nature of genes, their replication and mode of action at the molecular level. Transfer and expression of genetic information; interaction and hybridization of genes, molecular mutagens and molecular evolution. Four hours lecture. *Prerequisites: Biology 400; and Biology 421 and 422 or 423; and Chemistry 223 or 323.* (4 units)

431. Comparative Plant Physiology

Analysis of physiological activity at the various levels of cells, tissues, organs and organisms. Four hours lecture and six hours laboratory. *Prerequisites: Biology 200, 201, 202, 300 and Chemistry 223 or 323.* Recommended: Biology 360. (6 units)

440. Principles of Development

Comparative analysis of patterns and processes of development of organisms, with emphasis on the role of genetic and biochemical mechanisms. Four hours lecture and three hours laboratory. *Prerequisites: Biology 200, 201, 202, 300 and Chemistry 223 or 323.* (5 units)

450. Ecology

Analysis of the interrelationships of organisms and their physical and biotic environment with a consideration of the role of the environment in natural selection. Four hours lecture and three hours laboratory/field studies. *Prerequisites: Biology 200, 201, 202 and Mathematics 120, 192 or 211.* (5 units)

455. Marine Biology and Oceanography

Environment, diversity and ecology of marine fauna and flora, and consideration of physical oceanography. Four hours lecture and three hours laboratory/field studies. *Prerequisites: Biology 200, 201, 202 and a field course in biology.* (5 units)

472. Virology

Examination of the structure, genetics and modes of replication of viruses, viroids and other related sub-cellular entities; their implications in medicine and agriculture, and their use in scientific research. Four hours lecture. *Prerequisites: Biology 200, 201, 202, 300 and 320.* (4 units)

476. Immunology

Foundations of immunology and current advances in the study of the immunological response. Laboratory examination of immunological assays applied in both research and clinical diagnostics. Four hours lecture and three hours laboratory. *Prerequisites: Biology 421, 422 and Chemistry 223 or 323.* (5 units)

480. Introduction to Neurobiology

Study on a cellular level of how neurons function in terms of structure, physiology and pharmacology. Mechanisms of inter-cellular communication, perception of sensory information, and development and aging of the nervous system will be examined. Four hours lecture. *Prerequisite: Biology 300.* (4 units)

486. Endocrinology

Endocrine systems with emphasis on mechanisms for regulating the biosynthesis, secretion, transport and actions of hormones. Four hours lecture. Formerly Biology 376. *Prerequisite: Biology 424.* Biology 342 is highly recommended. (4 units)

490. Special Topics

Group study of a selected topic, the title to be specified in advance. May be repeated for credit as topics change. *Prerequisite: 15 units of upper-division biology course work.*

A. (1 unit)

B. (2 units)

C. (3 units)

491. Special Laboratory Topics

Group laboratory study of a selected topic, the title to be specified in advance. May be repeated for credit as topics change. *Prerequisite: 15 units of upper-division biology course work.*

- A. (1 unit)
- B. (2 units)
- C. (3 units)

492. Recombinant DNA Techniques

Techniques utilized in genetic engineering and biotechnology areas (mainly methods for isolating and analyzing genes, including bacterial isolation, DNA isolation and restriction analysis, transformation protocols and purification and manipulation of plasmid and chromosomal DNA techniques). A final research report will be required from the student. Two hours lecture and six hours laboratory. *Prerequisite: Biology 200 or consent of instructor.* (4 units)

522. The Genetics and Ecology of Populations

Genetic and ecological mechanisms influencing the development, maintenance and evolution of populations. Four hours lecture. *Prerequisites: Biology 421, 422 and Mathematics 120, 192 or 211.* (4 units)

524. Advanced Vertebrate Morphology

Advanced techniques in the study of vertebrates, including dissection and specimen preparation. Construction of animal skeletal materials, and detailed study and dissection of vertebrate organ systems will provide the basis for projects designed on an individual student basis. Two hours lecture and three hours laboratory. *Prerequisites: Biology 342, 424 and consent of instructor.* (3 units)

530. Scanning Electron Microscopy

Theory and techniques of scanning electron microscopy. Lectures on theory of operation of the scanning electron microscope and specimen preparation. Laboratory includes hands-on training in the use of the scanning electron microscope. Laboratory projects will teach technical aspects of specimen preparation and microscope use. Three hours lecture and six hours laboratory. (Also offered as Geology 530. Students may not receive credit for both.) *Prerequisites: senior standing and consent of instructor.* (5 units)

531. Transmission Electron Microscopy

Theory and techniques of transmission electron microscopy. Lectures on theory of operation of the transmission electron microscope and specimen preparation. Laboratory includes hands-on training in the use of the transmission electron microscope. Laboratory projects will teach technical aspects of specimen preparation and microscope use. Three hours lecture and six hours laboratory. (Also offered as Geology 531. Students may not receive credit for both.) *Prerequisites: senior standing and consent of instructor.* (5 units)

532. Techniques in Ultrastructure Analysis

Specialized techniques in ultrastructural analysis using either the scanning or transmission electron microscope. Topics will vary, but will include specialized techniques in specimen preparation, alternative image detectors, and image analysis. Theory of the analysis and training in the technical aspects will be covered. Three hours lecture and six hours laboratory. (Also offered as Geology 532. Students may not receive credit for both.) *Prerequisites: Biology 530 or 531, or Geology 530 or 531 and consent of instructor.* (5 units)

575. Internship in Biology

Supervised work and study in work situations involving biological research and technical skills. May be applied only once toward degree electives in biology programs. May be repeated twice for free elective credit. Graded credit/no credit. *Prerequisite: department approval in the quarter prior to registration.* (2 units)

590. Senior Seminar

Survey of current literature, methods and ethics of scientific inquiry. May be repeated once as topics change. *Prerequisites: Biology 200, 201, 202 and a minimum of 15 upper-division units in biology courses supportive of the topic area and senior standing.*

- A. Molecular (2 units)
- B. Biosystematics (2 units)
- C. Cellular (2 units)
- D. Physiology (2 units)
- E. Ecology (2 units)
- F. Bioethics (2 units)
- G. Genetics (2 units)
- H. Evolution (2 units)
- I. Microbiology (2 units)
- J. Zoology (2 units)
- K. Botany (2 units)

595. Independent Study

Laboratory and/or library research in selected areas in biology conducted under the direction of a faculty member. A total of six units in Biology 595 may be applied toward graduation. Graded credit/no credit. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and department approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* Consent must be obtained no later than the advisement period preceding the quarter of enrollment. All students will be required to attend the Biology Department colloquium called by the department chair each quarter until their projects are completed. (Credit to be arranged: 1 to 6 units)

CHEMISTRY

Accredited by the American Chemical Society

Department of Chemistry

Physical Sciences Building, Room 319
880-5318

Bachelor of Arts

Chemistry

Bachelor of Science

Chemistry

ACS Certified Option

Biochemistry Option

Teaching Credential Program

Chemistry

Minor

Chemistry

FACULTY: Kimberley Cousins, John Craig (Chair), Glenn Maguire, Ken Mantei, David Maynard, Larry Mink, Dennis Pederson, Lisa Shamansky, Brett Stanley, John Tate

The Department of Chemistry provides:

1. Undergraduate training in chemistry for students planning professional careers in chemistry and allied professions such as medicine, dentistry, pharmacy, health sciences and veterinary medicine and for those contemplating graduate work for advanced degrees;
2. Appropriate courses for the teacher credential program;
3. Fundamental chemical science courses required by students majoring in related fields such as physics and biology;
4. An understanding of the achievements and contributions of chemistry as a science.

The Bachelor of Science in Chemistry (ACS Certified Option) satisfies the requirements for certification by the American Chemical Society.

The Bachelor of Arts in Chemistry provides greater elective flexibility for double majors and for preprofessional, interdisciplinary or other programs involving substantial preparation in chemistry.

Preprofessional students of medicine, dentistry or other science-based fields seeking a major in chemistry should refer to Page 64 of this catalog and consult with a departmental advisor.

Students interested in fields such as environmental science, environmental law, business, and clinical chemistry can pursue these by following the minimum requirements of the major and appropriate electives.

B.A. IN CHEMISTRY

Requirements (90-92 units)

Requirements for the B.A. in Chemistry:

Lower-division requirements (47-49 units)

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
2. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
3. Chem 245. Modern Quantitative Analysis (5)
4. Math 211. Basic Concepts of Calculus (4)
5. Math 212. Calculus II (4)
6. Math 213. Calculus III (4)
7. A minimum of thirteen units, choose Group A or B below:

Group A:

- | | |
|-----------|-----------------------------------|
| Phys 121. | Basic Concepts of Physics I (5) |
| Phys 122. | Basic Concepts of Physics II (4) |
| Phys 123. | Basic Concepts of Physics III (4) |

Group B:

- | | |
|-----------|-------------------------|
| Phys 221. | General Physics I (5) |
| Phys 222. | General Physics II (5) |
| Phys 223. | General Physics III (5) |

8. Biological science

Five units chosen from:

- | | |
|-----------|----------------------------|
| Biol 100. | Topics in Biology (5) |
| Biol 200. | Biology of the Cell (5) |
| Biol 201. | Biology of Organisms (5) |
| Biol 202. | Biology of Populations (5) |

Upper-division requirements (39 units)

1. Chem 321. Principles of Organic Chemistry I (5)
2. Chem 322. Principles of Organic Chemistry II (5)
3. Chem 323. Principles of Organic Chemistry III (5)

Note: Subject to departmental approval the organic chemistry requirement may be met with the following:

- | | |
|-----------|--------------------------------|
| Chem 221. | Organic Chemistry I |
| Chem 222. | Organic Chemistry II |
| Chem 223. | Organic Chemistry III |
| Chem 421. | Intermediate Organic Chemistry |

4. Chem 455. Physical Chemistry I (6)
5. Chem 456. Physical Chemistry II (6)
6. Chem 475. Inorganic Chemistry (6)
7. Chem 590. Chemistry Seminar (1)
8. Five additional upper-division units in chemistry.

Foreign Language, four units which may be met by electing the foreign language option in the Foreign Language or Literature in Translation category in general education. Students may not choose French/German/Spanish 290 to meet this requirement.

B.S. IN CHEMISTRY - ACS CERTIFIED OPTION

Requirements (118 units)

Requirements for the B.S. in Chemistry—ACS Certified Option:

Lower-division requirements (53 units)

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
2. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
3. Chem 245. Modern Quantitative Analysis (5)
4. Math 211. Basic Concepts of Calculus (4)
5. Math 212. Calculus II (4)
6. Math 213. Calculus III (4)
7. Math 251. Multivariable Calculus I (4)
8. Phys 221. General Physics I (5)
9. Phys 222. General Physics II (5)
10. Phys 223. General Physics III (5)
11. Biological science

Five units chosen from:

- | | |
|-----------|----------------------------|
| Biol 100. | Topics in Biology (5) |
| Biol 200. | Biology of the Cell (5) |
| Biol 201. | Biology of Organisms (5) |
| Biol 202. | Biology of Populations (5) |

Upper-division requirements (53 units)

1. Chem 321. Principles of Organic Chemistry I (5)
2. Chem 322. Principles of Organic Chemistry II (5)
3. Chem 323. Principles of Organic Chemistry III (5)

Note: Subject to departmental approval the organic chemistry requirement may be met with the following:

- | | |
|-----------|--------------------------------|
| Chem 221. | Organic Chemistry I |
| Chem 222. | Organic Chemistry II |
| Chem 223. | Organic Chemistry III |
| Chem 421. | Intermediate Organic Chemistry |

4. Chem 455. Physical Chemistry I (6)
5. Chem 456. Physical Chemistry II (6)
6. Chem 475. Inorganic Chemistry (6)
7. Chem 545. Advanced Analytical Chemistry (6)
8. Chem 576. Advanced Inorganic Chemistry (4)
9. Chem 590. Chemistry Seminar (1)
10. Nine upper-division units in chemistry.

Note: An upper-division course in mathematics or physics selected in consultation with the departmental advisor may be included.

Comprehensive examination, successful completion of a comprehensive examination covering the major field of study to be taken during the senior year.

Foreign Language, four units which may be met by electing the foreign language option in the Foreign Language or Literature in Translation category in general education. Students may not choose French/German/Spanish 290 to meet this requirement.

Computer Science, four units selected with department approval.

Applied mathematics, four units chosen from:

- | | |
|-----------|---------------------------------------|
| Math 252. | Multivariable Calculus II (4) |
| Math 270. | Elementary Differential Equations (4) |
| Math 331. | Linear Algebra (4) |

B.S. IN CHEMISTRY - BIOCHEMISTRY OPTION

Requirements (116 to 118 units)

Requirements for the B.S. in Chemistry— Biochemistry Option:

Lower-division requirements (57 to 59 units)

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
2. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
3. Chem 245. Modern Quantitative Analysis (5)
4. Math 211. Basic Concepts of Calculus (4)
5. Math 212. Calculus II (4)
6. Math 213. Calculus III (4)
7. A minimum of thirteen units, choose Group A or B below:

Group A:

- | | |
|-----------|-----------------------------------|
| Phys 121. | Basic Concepts of Physics I (5) |
| Phys 122. | Basic Concepts of Physics II (4) |
| Phys 123. | Basic Concepts of Physics III (4) |

Group B:

- | | |
|-----------|-------------------------|
| Phys 221. | General Physics I (5) |
| Phys 222. | General Physics II (5) |
| Phys 223. | General Physics III (5) |

8. Biol 200. Biology of the Cell (5)
9. Biol 201. Biology of Organisms (5)
10. Biol 202. Biology of Populations (5)

Upper-division requirements (55 units)

1. Chem 321. Principles of Organic Chemistry I (5)
2. Chem 322. Principles of Organic Chemistry II (5)
3. Chem 323. Principles of Organic Chemistry III (5)

Note: Subject to departmental approval the organic chemistry requirement may be met with the following:

- | | |
|-----------|--------------------------------|
| Chem 221. | Organic Chemistry I |
| Chem 222. | Organic Chemistry II |
| Chem 223. | Organic Chemistry III |
| Chem 421. | Intermediate Organic Chemistry |

4. Chem 436. Biochemistry I (5)
5. Chem 437. Biochemistry II (5)
6. Chem 439. Separation Techniques in Biochemistry (2)
7. Chem 455. Physical Chemistry I (6)
8. Chem 456. Physical Chemistry II (6)
9. Chem 475. Inorganic Chemistry (6)
10. Chem 590. Chemistry Seminar (1)

11. A minimum of nine units chosen from:

- Biol 300. Cell Physiology (5)
- Biol 400. Molecular Biology (6)
- Biol 428. Concepts of Molecular Genetics (4)
- Biol 440. Principles of Development (5)
- Biol 472. Virology (4)
- Biol 476. Immunology (6)
- Biol 486. Endocrinology (4)

12. Successful completion of a comprehensive examination covering the major field of study to be taken during the senior year.

Foreign Language, four units which may be met by electing the foreign language option in the Foreign Language or Literature in Translation category in general education. Students may not choose French/German/Spanish 290 to meet this requirement.

TEACHING CREDENTIAL PROGRAM

Students wishing to be recommended for a single subject teaching credential in physical science must either as part of the requirements for the Bachelor of Arts or Bachelor of Science major in chemistry or as electives in addition to the requirements for the degree take the following:

1. Geol 101. Physical Geology (5)
2. Geol 310. Intermediate Field Studies (2)
or
Geol 440. Geology of California (4)
3. Phys 103. Descriptive Astronomy (5)
4. Phys 221. General Physics I (5)
5. Phys 222. General Physics II (5)
6. Phys 223. General Physics III (5)
7. One of the following:
 - NSci 300. Science and Technology (4)
 - NSci 310. The Environment and Human Survival (4)
 - NSci 312. Scientific Contributions to the Development of Civilization (4)

In addition, certain prerequisites and professional education courses are required. For information about admission to the teacher education program, the professional component, or the specific requirements of the single subject waiver program, see Page 145 or contact the School of Education C.A.S.E.- Credentials Office.

All Single Subject Waiver programs are being reviewed and may be revised due to changes in Statewide requirements. Students who declare the B.A. or B.S. in Chemistry after January 1995 and who wish to eventually be recommended for acceptance into the teaching credential program must follow the new requirements available in the Chemistry Department Office.

MINOR IN CHEMISTRY

Requirements (64 to 69 units)

Requirements for a minor in Chemistry:

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
2. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
3. Chem 245. Modern Quantitative Analysis (5)
4. A minimum of twelve units, choose Group A or B below:
 - Group A:
 - Chem 221. Organic Chemistry I (4)
 - Chem 222. Organic Chemistry II (4)
 - Chem 223. Organic Chemistry III (4)
 - Group B:
 - Chem 321. Principles of Organic Chemistry I (5)
 - Chem 322. Principles of Organic Chemistry II (5)
 - Chem 323. Principles of Organic Chemistry III (5)
5. Math 211. Basic Concepts of Calculus (4)
6. Math 212. Calculus II (4)
7. Math 213. Calculus III (4)
8. A minimum of thirteen units, choose Group A or B below:
 - Group A:
 - Phys 121. Basic Concepts of Physics I (5)
 - Phys 122. Basic Concepts of Physics II (4)
 - Phys 123. Basic Concepts of Physics III (4)
 - Group B:
 - Phys 221. General Physics I (5)
 - Phys 222. General Physics II (5)
 - Phys 223. General Physics III (5)
9. Ten additional upper-division units in chemistry.

DEPARTMENTAL HONORS

A graduating senior will be awarded departmental honors in chemistry after meeting the following requirements:

1. At least a 3.5 average in all chemistry course work taken at the university with a minimum being five chemistry courses;
2. At least a 3.0 ("B") average on the comprehensive examinations;
3. An "A" (4.0) in Chemistry 595. Independent Study or another demonstration of ability to do independent work in chemistry.

COURSE OFFERINGS IN CHEMISTRY (Chem)

Lower Division

100. Chemistry in the Modern World (FWS)
Examination of chemistry, its use by modern man and its value to contemporary society. Designed primarily for students who desire a broad overview of chemistry but have no high school background in the subject. Four hours lecture and three hours laboratory. *Prerequisite: satisfactory score on the Entry Level Mathematics examination.* (5 units)

105. Chemicals in Our Environment (FWS)
Examination of a current issue related to chemicals in our environment with focus on chemical principles and the interplay between chemical technology and society. Lecture only. (2 units)

205. Fundamentals of Chemistry I: General Chemistry (FS)
Basic introduction to the concepts of chemistry, including the composition of matter and physical and chemical changes. Designed primarily for the student with little or no chemistry background who plans to take additional chemistry or other science courses. Four hours lecture and three hours laboratory. *Prerequisites: one year of high school algebra or equivalent and satisfactory score on the Entry Level Mathematics examination.* (CAN CHEM SEQ B) (5 units)

206. Fundamentals of Chemistry II: Organic Chemistry (FW)
Introduction to the chemistry of organic compounds. Four hours lecture and three hours laboratory. *Prerequisite: Chemistry 205.* (CAN CHEM SEQ B) (5 units)

207. Fundamentals of Chemistry III: Biochemistry (WS)
Introduction to the principles of modern biological chemistry and to organic compounds of biological interest. Four hours lecture and three hours laboratory. *Prerequisite: Chemistry 206.* (CAN CHEM SEQ B) (5 units)

215. General Chemistry I: Atomic Structure and Chemical Bonding (FW)
Stoichiometry, atomic and molecular structure, chemical bonding, states of matter and solutions. Designed primarily for the student majoring in the biological or physical sciences. Four hours lecture and six hours laboratory. *Prerequisites: one year of high school chemistry and three years of high school mathematics, or their equivalents; satisfactory score on the Entry Level Mathematics examination.* (CAN CHEM 2) (6 units)

216. General Chemistry II: Principles of Chemical Reactions (WS)
Chemical kinetics and equilibrium, thermodynamics, redox reactions and electrochemistry, and topics in inorganic, organic, biological and environmental chemistry. Four hours lecture and six hours laboratory. *Prerequisite: Chemistry 215.* (CAN CHEM 4) (6 units)

221. Organic Chemistry I (F)
Descriptive discussion of carbon compounds, including modern concepts of structure, reaction mechanisms and reactivity. Major emphasis is placed on organic compounds of biological interest. Three hours lecture and three hours laboratory. (For nonchemistry majors only.) *Prerequisite: Chemistry 216 or equivalent.* (4 units)

222. Organic Chemistry II (W)
Continuation of Chemistry 221. Three hours lecture and three hours laboratory. *Prerequisite: Chemistry 221 or equivalent.* (4 units)

223. Organic Chemistry III (S)
Continuation of Chemistry 222. Three hours lecture and three hours laboratory. *Prerequisite: Chemistry 222 or equivalent.* (4 units)

245. Modern Quantitative Analysis (S)
Gravimetric and volumetric analysis, chemical equilibria, modern instrumental methods and radioanalytical techniques. Three hours lecture and six hours laboratory. Formerly Chemistry 217. *Prerequisite: Chemistry 216.* (CAN CHEM 12) (5 units)

295. Special Projects in Chemistry (FWS)
Individual investigation, research, study or survey of selected problems. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 or 2 units)

Upper Division

304. Chemistry in the Classroom (FWS)
Basic concepts of chemistry as related to the elementary and middle school classroom. Concepts include elements, compounds and mixtures, states of matter, physical and chemical changes, transformations of matter, acids and bases, chemical identification, energetics and kinetics. One hour lecture and three hours laboratory. *Prerequisite: one college-level course in earth science or physics.* (2 units)

305. Demonstration Laboratory in Chemistry
A demonstration laboratory exploring the basic principles of chemistry through individual student demonstrations. Three hours laboratory. *Prerequisite or corequisite: Chemistry 304.* (1 unit)

321. Principles of Organic Chemistry I (F)
Detailed study of organic molecules and their structures, reaction mechanisms, stereochemistry and synthesis. Three hours lecture and six hours laboratory. *Prerequisite: Chemistry 216.* (5 units)

322. Principles of Organic Chemistry II (W)
Continuation of Chemistry 321. Three hours lecture and six hours laboratory. *Prerequisite: Chemistry 321.* (5 units)

323. Principles of Organic Chemistry III (S)
Continuation of Chemistry 322, including special topics in heterocyclic compounds, fats, carbohydrates, and amino acids and proteins. Three hours lecture and six hours laboratory. *Prerequisite: Chemistry 322.* (5 units)

392. Scientific Glassblowing (W)

Principles and skills in the construction, modification and repair of scientific glass apparatus. *Prerequisite: consent of instructor.* (2 units)

421. Intermediate Organic Chemistry (S-alt yr)

Organic reaction mechanisms, quantitative identification of organic compounds, and instrumental organic analysis. Three hours lecture and six hours laboratory. *Prerequisite: Chemistry 223 or 323.* (5 units)

436. Biochemistry I (FS)

Chemistry of proteins, carbohydrates, lipids, and other classes of biomolecules; the kinetics, mechanism and structure of enzymes; the principles of bioenergetics; and the basic principles of metabolism. Four hours lecture and three hours laboratory. *Prerequisites: Chemistry 216, and 223 or 323.* (5 units)

437. Biochemistry II (W)

Biochemical processes that yield and utilize energy: metabolism of carbohydrates, lipids, amino acids, purines and nucleic acid biosynthesis. Four hours lecture and three hours laboratory. *Prerequisite: Chemistry 436.* (5 units)

439. Separation Techniques in Biochemistry (S)

Laboratory experience in techniques commonly employed in the separation of proteins and nucleic acids. Six hours laboratory. *Prerequisite: Chemistry 436.* (2 units)

455. Physical Chemistry I (F)

Thermodynamics and the properties of solutions. Four hours lecture and six hours laboratory. *Prerequisites: Chemistry 216, Mathematics 202 or 213, and Physics 123 or 223.* Recommended: Mathematics 251. (6 units)

456. Physical Chemistry II (W)

Phase equilibria, electrochemistry, transport properties, reaction rates and mechanisms, and quantum mechanics. Four hours lecture and six hours laboratory. *Prerequisite: Chemistry 455.* (6 units)

475. Inorganic Chemistry (S)

Inorganic compounds and reactions. Special emphasis on group theory, structure, kinetics, and thermodynamic principles. Four hours lecture and six hours laboratory. *Prerequisite or corequisite: Chemistry 456.* (6 units)

500. Topics in Chemistry

Lecture course on an advanced chemistry topic such as: biophysical chemistry, history of chemistry, literature of chemistry, natural products chemistry, polymer chemistry, synthetic organic chemistry, theoretical organic chemistry or quantum mechanics. May be repeated for credit as topics change. Lecture only. *Prerequisite: consent of instructor.* (2 units)

501. Advanced Laboratory Techniques

Advanced laboratory course on a subject such as organic or inorganic chemistry. May be repeated for credit as topics change. *Prerequisites: the basic course covering the subject of the Advanced Laboratory Techniques course and consent of instructor.* (2 units)

521. Advanced Organic Chemistry

Advanced topics in synthetic and mechanistic organic chemistry with emphasis on recent developments and techniques in organic chemistry. Lecture only. *Prerequisite: Chemistry 323 or 421.* (4 units)

545. Advanced Analytical Chemistry (S-alt yr)

Principles and techniques of modern instrumental analysis, including spectrophotometry, spectroscopy, chromatography, X-ray analysis, mass spectrometry and potentiometry. Four hours lecture and six hours laboratory. *Prerequisites: Chemistry 223 or 323, 245 and 456.* (6 units)

575. Internship in Chemistry (FWS)

Supervised work and study in applied chemistry in an off-campus setting. Graded credit/no credit. *Prerequisites: course work appropriate to the specific internship, junior standing and consent of department.* (4 units)

576. Advanced Inorganic Chemistry (F-alt yr)

Current developments in inorganic chemistry, including coordination chemistry, non-metals and metalloids. Lecture only. *Prerequisite: Chemistry 475.* (4 units)

590. Chemistry Seminar (S)

Topics of current chemical interest, presented by students, faculty and guest speakers. May be taken once for credit toward the major requirements for graduation. Lecture only. *Prerequisite: Chemistry 323 or 455.* (1 unit)

595. Independent Study (FWS)

Laboratory and/or library research conducted under the direction of a faculty member. A total of six units in Chemistry 595 may be applied toward the major. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

COMMUNICATION

Department of Communication Studies

University Hall, Room 201.14
880-5815

Bachelor of Arts

Communication
with concentrations in
Public Argumentation and Rhetoric
Human Communication
Mass Communication

Teaching Credential

English with a Concentration in Communication Studies

Minor

Communication

Certificate Program

Communication Skills

FACULTY: Risa Dickson, Mary Fong, Cheryl Harris,
Fred Jandt, Kevin Lamude, Craig Monroe (Chair), Meryl Perlson,
Scott Rodriguez, Dolores Tanno

Defined as "the creation, transmission and evaluation of messages," communication is a multifaceted discipline combining both academic and professional interests.

Through courses in communication, students learn to describe, interpret and evaluate the communication processes as they occur within and among individuals, groups, organizations and societies. Students explore problems in diverse media (platform, conference, print, radio, television, film), settings (family, industry, professions, government) and contexts (racial, cultural, international).

The educational objectives established for the degree program in communication are the following terminal competencies: understand relationships between symbols and culture, discover information from its sources, describe characteristics of potential audiences, translate information into an audience's conceptual framework, transmit information/messages clearly in media appropriate to the audience, evaluate messages and their effects on audiences and appreciate the ethics of communication.

By the mid-1980s more than half of the country's gross national product was spent on information products and services. Communication is the means by which information is shared. The growth of communication studies reflects, in part, a growing technology permitting spoken language to move from the forum of Greece to the surface of the moon and around the planet in mere moments.

Communication majors enter careers in business and industry, government and social services, education, media and the professions in positions of public relations, marketing, teaching, sales, media production, writing, personnel, on-air media, advertising and training. Men and women across the ages have testified how the study of communication aided their personal and professional lives, whether they

be persuaders, conciliators, diplomats, teachers and scholars, or researchers.

In today's world of changing and integrated communications technology, the department's curriculum reflects the belief that communication should be studied as a single discipline integrated into the liberal arts. Practicums and internships support but do not substitute for a sound theoretical base. Participants in department-sponsored journalism and radio laboratories are required to register in Communication 243, Communication Practicum; participants in intercollegiate-forensics activities are required to register in Communication 382, Intercollegiate Forensics. Internships are available on and off campus in the full range of communication professions.

B.A. IN COMMUNICATION

Requirements (72 units)

Requirements for the B.A. in Communication:

Core Courses (24 units)

1. Comm 200. Introduction to Communication Studies (4)
2. Comm 304. Intercultural Communication (4)
3. Comm 306. Communication Perspectives (4)
4. Comm 400. Communication Research Methodologies (4)
5. Comm 501. Ethical Aspects of Communication (4)
6. Comm 509. Computer Mediated Communication (4)

Communication Practica (8 units)

Students must choose eight units from at least two of the following:

- Comm 243A. Communication Practicum: Journalism, Photojournalism and Public Relations (3)
- Comm 243B. Communication Practicum: Radio (3)
- Comm 382. Intercollegiate Forensics (3)
- Comm 444A. Advanced Communication Practicum: Television Production (3)
- Comm 444B. Advanced Communication Practicum: Research (3)
- Comm 591. Internship/Externship (2-5)

Electives (16 units)

Sixteen units in addition to those chosen in the concentration, of which 12 must be upper-division, selected in consultation with the advisor and, in the case of non-departmental electives, the approval of the chair. Communication 120 and 180 may not be applied toward the major.

Concentration (24 units)

Human Communication Concentration

24 units chosen from:

- Comm 203. Introduction to Human Communication (4)
- Comm 221. Small Group Communication (4)
- Comm 225. Fundamentals of Interpersonal Communication (4)
- Comm 311. Business and Professional Communication (4)
- Comm 312. Persuasion (4)

- Comm 331. Communication for Training Programs (4)
- Comm 341. Introduction to Public Relations (4)
- Comm 343. Public Affairs Reporting (4)
- Comm 344. Public Relations Practices (4)
- Comm 403. Interpersonal Relations (4)
- Comm 421. Organizational Communication (4)
- Comm 422. Communication in Conflict (4)
- Comm 431. Classroom Communication (4)
- Comm 441. Interviewing (4)
- Comm 442. Public Relations Campaigns (4)
- Comm 502. Legal Aspects of Communication (4)
- Comm 585. Topics in Human Communication (4)

Mass Communication Concentration

24 units as follows:

Core (8 units)

1. Comm 240. Writing for Broadcast Media (4)
2. Comm 300. Mass Media and Culture (4)

Electives (16 units)

Sixteen units chosen from:

- Art 390. Beginning Photography (5)
- Comm 245. Introduction to TV and Video Production (4)
- Comm 311. Business and Professional Communication (4)
- Comm 341. Introduction to Public Relations (4)
- Comm 342. Newspaper Editing and Makeup (4)
- Comm 343. Public Affairs Reporting (4)
- Comm 344. Public Relations Practices (4)
- Comm 345. Advanced TV and Video Production (4)
- Comm 346. TV and Video Field Production (4)
- Comm 352. Broadcast Management (4)
- Comm 381. The Development of Motion Pictures (4)
- Comm 387. Radio Production (4)
- Comm 401. Gender, Race, and the Mass Media (4)
- Comm 415. Advertising as Social Communication (4)
- Comm 442. Public Relations Campaigns (4)
- Comm 450. Broadcast Research and Audience Analysis (4)
- Comm 471. Comparative Communication Systems (4)
- Comm 502. Legal Aspects of Communication (4)
- Comm 587. Topics in Mass Communication (4)

Public Argumentation and Rhetoric Concentration

24 units chosen from:

- Comm 204. Introduction to Critical Communication Studies (4)
- Comm 302. Communication and Language Theories (4)
- Comm 305. Critical Approaches to Communication (4)
- Comm 308. Argumentation (4)
- Comm 312. Persuasion (4)
- Comm 341. Introduction to Public Relations (4)
- Comm 344. Public Relations Practices (4)
- Comm 401. Gender, Race, and the Mass Media (4)
- Comm 411. Women and Communication (4)
- Comm 442. Public Relations Campaigns (4)
- Comm 502. Legal Aspects of Communication (4)
- Comm 581. Contemporary Theories of Rhetoric (4)

- Comm 584. Topics in Critical Communication (4)

Individualized Concentration

Students may propose a unique, individualized 24-unit concentration if the proposed concentration has curricular integrity and if it fulfills objectives that cannot be met through one of the concentrations listed above. Proposals, which require departmental approval, must be submitted no later than the student's junior year. Only 12 units of course work completed prior to such approval can be applied toward an individualized concentration.

TEACHING CREDENTIAL PROGRAM

Teaching Credential Program - English with a Concentration in Communication Studies

In order to be recommended for the teaching credential in English with a concentration in Communication Studies (English subject matter program), students must complete the courses listed in the core of the B.A. in English (lower-division requirements 1-3, and upper-division requirements 1-7 found on page 160) and complete the following:

1. *Four units chosen from:*

- CSci 127. Introduction to Computer Technology for Educators (4)
- Comm 245. Introduction to TV and Video Production (4)

2. *Four units chosen from:*

- Hum 312. Theories of Language Acquisition and Learning (4)
- Eng 420. Pedagogical Grammar (4)

3. *Four units chosen from:*

- Eng 495. Expository Writing (4)
- Hum 495. Expository Writing for the Humanities (4)
- Eng 510. English in the Secondary Classroom (4)
- Comm 304. Intercultural Communication (4)
- Comm 382. Intercollegiate Forensics (3)
- Comm 501. Legal and Ethical Communication (4)

8. *Four units chosen from:*

- Comm 305. Critical Approaches to Communication (4)
- Comm 308. Argumentation (4)
- Comm 312. Persuasion (4)
- Comm 401. Gender, Race and the Mass Media (4)
- Comm 411. Women and Communication (4)

9. *Four units chosen from:*

- Comm 306. Communication Perspectives (4)
- Comm 403. Interpersonal Relations (4)
- Comm 422. Communication in Conflict (4)

10. *Four units chosen from:*

- Comm 342. Newspaper Editing and Makeup (4)
- Comm 344. Public Relations Practices (4)
- Comm 345. Advanced TV and Video Production (4)
- Comm 381. The Development of Motion Pictures (4)

Prior to student teaching, students must demonstrate subject matter competence as assessed by the Department of

English. For information about the professional education component, prerequisites for and admission to the teacher education program, or specific requirements for the single subject credential program, see Page 146 or contact the School of Education C.A.S.E.-Credentials Office.

Note: Completing the requirements of the teaching credential in English with a concentration in Communication Studies does NOT in itself satisfy the requirements for the major in either Communication or English.

MINOR IN COMMUNICATION

Requirements (24 units)

Requirements for a minor in Communication:

Lower-division requirement (4 units)

1. Comm 200. Introduction to Communication Studies (4)

Upper-division requirements (8 units)

1. Comm 304. Intercultural Communication (4)
2. Comm 306. Communication Perspectives (4)

Electives (12 units)

Twelve additional units in communication, at least eight of which must be upper-division. Communication 501 strongly recommended.

DEPARTMENTAL HONORS

Students majoring in communication are eligible to receive honors in communication at graduation if the following conditions are met:

1. At least one-half of the course work required by the major completed at this university;
2. At least a 3.5 grade point average in the major;
3. An overall grade point average of 3.5 or better;
4. An independent study course that culminates in a research presentation to the department;
5. Recommendation for departmental honors by the Communication Studies faculty.

Students interested in this recognition must file a formal application with the department at least three quarters prior to graduation.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level

courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Communication Skills

Certificate Requirements (32 units)

Required Course (4 units)

- Comm 501. Legal and Ethical Aspects of Communication (4)

Electives (28 units)

1. Public speaking

Four units chosen from:

- Comm 120. Oral Communication (4)
Comm 180. Critical Thinking Through Argumentation (4)
Comm 311. Business and Professional Communication (4)

2. Intercultural communication

Four units chosen from:

- Comm 304. Intercultural Communication (4)
Comm 411. Women and Communication (4)

3. Interpersonal communication

Four units chosen from:

- Comm 221. Small Group Communication (4)
Comm 225. Fundamentals of Interpersonal Communication (4)
Comm 331. Communication for Training Programs (4)
Comm 403. Interpersonal Relations (4)
Comm 441. Interviewing (4)

4. Public relations

Four units chosen from:

- Comm 341. Introduction to Public Relations (4)
PA 307. Public Relations in the Public Sector (4)

5. Journalism

Eight units chosen from:

- Comm 240. Writing for Media (4)
Comm 342. Newspaper Editing and Makeup (4)
Comm 343. Public Affairs Reporting (4)

6. Media

Two courses for a minimum of four units chosen from:

- Art 380. Communications Design I (5)
Art 381A. Advanced Communications Design (5)
Art 381B. Advanced Communications Design (2.5)
Art 386. Audio and Video Media (4)
Art 390. Beginning Photography (5)
Comm 381. The Development of Motion Pictures (4)
Mus 266. Introduction to Computer and Electronic Music (4)
Mus 267. Introduction to Studio Recording Techniques (4)
Mus 519. Audio Production (2)
TA 253. Voice and Movement for the Stage II (2)

COURSE OFFERINGS IN COMMUNICATION (Comm)

Lower Division

120. Oral Communication

Introduction to effective speech communication with emphasis on informative and persuasive public speaking and presentation skills. (CAN SPCH 4) (4 units)

180. Critical Thinking Through Argumentation

Principles of oral argumentation and forensics: evidence, methods of logical analysis, reasoned discourse demonstrated through argumentative speeches and debates. (CAN SPCH 6) (4 units)

200. Introduction to Communication Studies

Descriptive overview of how humans communicate in various contexts within the areas of public argumentation and rhetoric, human communication, and mass communication. Includes introduction to communication processes, theories, and research methodologies. (4 units)

203. Introduction to Human Communication

Introduction to the theoretical bases of human communication: human use and perception of symbols in the contexts of communicative interactions. (4 units)

204. Introduction to Critical Communication Studies

Survey of the history and study of rhetoric as it contributes to a critical understanding of the role of communication in society. (4 units)

221. Small Group Communication

Theories of communication applied to small group situations emphasizing decision-making processes. (CAN SPCH 10) (4 units)

225. Fundamentals of Interpersonal Communication

A skills development course designed to facilitate student's acquisition of basic face-to-face communication competencies such as building and maintaining communication climates, listening, perception, self-disclosure, and verbal and non-verbal communication. (4 units)

240. Writing for Media

Development of basic writing skills and practices appropriate for print and electronic media, including news, feature story, and documentary writing skills. Three hours lecture and two hours laboratory. *Prerequisites: English 101 or equivalent and word processing ability.* (4 units)

243. Communication Practicum

Practical application of communication skills. A combination of Communication 243A and 243B may be repeated for a total of not more than 6 units. Graded credit/no credit.

- A. Journalism, Photojournalism and Public Relations (3 units)
- B. Radio (3 units)

245. Introduction to TV and Video Production

Introduction to equipment, theory and procedures used in studio production of television and video programming. Camera, VTR, switcher, lighting, audio character generation, and the roles of crew members will be examined. Basic principles of pictorial composition and aesthetics of the video medium for a variety of applications will also be introduced. Three hours lecture and two hours laboratory. (4 units)

Upper Division**300. Mass Media and Culture**

Introduction to cultural, philosophical, critical, historical and international issues in mass communication. Includes focus on contemporary media problems. *Prerequisite: Communication 200.* (4 units)

302. Communication and Language Theories

Contemporary theories of language as they relate to the communication process, including semiotics and discourse theory. (4 units)

304. Intercultural Communication

Description and analysis of cultural and gender factors in communication such as perception, value systems, language codes and nonverbal communication. Overcoming the communication problems that can result when members of different cultures communicate. (4 units)

305. Critical Approaches to Communication

Contemporary approaches to media and rhetorical criticism, with emphasis on television, film and public discourse. (4 units)

306. Communication Perspectives

Traditional and contemporary approaches to communication theory, including an examination of the areas of rhetorical, human, and mediated communication. *Prerequisite: Communication 200.* (4 units)

308. Argumentation

Advanced principles of argumentation: perspectives, analysis and practice. *Prerequisite: completion of General Education Critical Thinking requirement.* (4 units)

311. Business and Professional Communication

Presentation skills and techniques used in sales, business, professional and technical fields for the communication of information. Special emphasis on technological resources for corporate communication. *Prerequisite: Communication 120 or equivalent.* (4 units)

312. Persuasion

Study and application of rhetorical, social-psychological and mass behavior principles. (4 units)

331. Communication for Training Programs

Techniques and functions of training programs in professional and technical settings. (4 units)

341. Introduction to Public Relations

Perspectives and principles of agency, business, governmental, and non-profit public relations. Historical perspectives, current and future trends, and career opportunities explored. (4 units)

342. Newspaper Editing and Makeup

The responsibilities of the copy editor—writing, story editing, headline treatment and page design. Includes electronic copy processing. Ethical considerations discussed. *Prerequisite: Communication 240.* (4 units)

343. Public Affairs Reporting

Methods and procedures for reporting activities of both public and private sectors. Includes interpretive and investigative practice. *Prerequisite: Communication 240.* (4 units)

344. Public Relations in Practice

Application of public relations perspectives and principles through training and practice in the development of public relations production skills: message construction and delivery, verbal, non-verbal and visual production work, and special events components. *Prerequisite: Communication 341.* (4 units)

345. Advanced TV and Video Production

Advanced techniques and aesthetics of television and video studio production, with emphasis on multicamera shooting and switcher effects. Introduction to video editing and postproduction processes. Three hours lecture and three hours laboratory. *Prerequisite: Communication 245 with a grade of "B" (3.0) or better.* (4 units)

346. TV and Video Field Production

Instruction in the use of portable video equipment for use in field and remote production, as well as postproduction processes associated with remote production. Nonfiction applications and theory will be emphasized. Three hours lecture and three hours laboratory. *Prerequisite: Communication 345 with a grade of "B" (3.0) or better.* (4 units)

352. Broadcast Management

Management styles and responsibilities of radio and television owners, programmers and producers. *Prerequisites: Communication 202, Management 302, or consent of instructor.* (4 units)

381. The Development of Motion Pictures

Survey of the historical background, commercial development and social influences of motion pictures. Course follows the medium from earliest origins through the rise and decline of the studio system and influences of television with emphasis on key directors and styles of film communication. (4 units)

382. Intercollegiate Forensics

Preparation for and participation in intercollegiate debate and/or individual events. Additional hours of supervised practice and performance required. May be repeated for credit for a total of not more than six units. Graded credit/no credit. (3 units)

387. Radio Production

Techniques and principles of recording, splicing, dubbing, and mixing sound for radio newscasts, commercials, public service announcements and promotional announcements. *Prerequisite: Communication 243B or consent of instructor.* (4 units)

399. Community Service Project

Credit for applying previously learned skills in the area of communication to academically related tasks in such agencies as governmental, social services, and educational institutions. May be repeated for a total of two units. Thirty hours of service per unit are required. Graded credit/no credit. *Prerequisite:*

departmental approval of a written application submitted in advance of the quarter in which the course is to be taken. (Credit to be arranged: 1 or 2 units)

400. Communication Research Methodologies

Study and application of basic historical, descriptive, critical and experimental research skills unique to communication. Data analysis. Includes ethical considerations of communication research. Formerly Communications 303. *Prerequisites: Communication 200, 304 and 306.* (4 units)

401. Gender, Race and the Mass Media

Critical and historical examination of images and representations of gender and race in the mass media. Course focuses primarily on film, television, advertising, and the press. (4 units)

403. Interpersonal Relations

An overview and examination of current concepts, issues and research in the study of human relationships. Primary focus on relational development, maintenance and disengagement in a variety of contexts. (4 units)

405. Advanced Study of Media Effects

History of research in understanding media effects on individuals and society. *Prerequisite: Communication 303.* (4 units)

411. Women and Communication

A critical examination of the impact of communication on women in three major areas: verbal and nonverbal behaviors, women as public speakers and the portrayal of women in the media. Formerly Communication 583B. (4 units)

415. Advertising as Social Communication

The critical and social theories of advertising and its political and economic roles in modern society. (4 units)

421. Organizational Communication

Study of current organizational communication theory and application to the management of communication within the organization. (4 units)

422. Communication in Conflict

Theories of communication for developing consensus through persuasion, problem-solving, conflict management, negotiation and mediation. Major emphasis is placed upon the means of achieving consensus among various societal groups. (4 units)

431. Classroom Communication

Communication skills in instructional settings, including strategies to facilitate understanding and analysis of classroom behavioral models. *Prerequisite: Communication 120 or equivalent.* (4 units)

441. Interviewing

Interviewing in formal and informal settings. Understanding of employment, journalistic, informative and persuasive interviews. *Prerequisite: Communication 120 or equivalent.* (4 units)

442. Public Relations Campaigns

Advanced course in public relations, case analysis, and campaign planning. *Prerequisites: Communication 341 and 344.* (4 units)

444. Advanced Communication Practicum

Advanced application of communication theory and methods. Communication 444A and 444B may be taken twice for credit for the major. Graded credit/no credit.

- A. Television Production. *Prerequisites: Communication 245, 345, and 346, with a grade of "B" (3.0) or better in Communication 346.* (3 units)
- B. Research. *Prerequisites: Communication 306 and 400.* (3 units)

450. Broadcast Research and Audience Analysis

Methods used for understanding the relationship between media producers, the audience, and other social forces. *Prerequisite: Communication 400.* (4 units)

471. Comparative Communication Systems

Examination of the major mass communication systems throughout the world in relation to their economic, political and cultural base. (4 units)

501. Ethical Aspects of Communication

Focuses on exploring and assessing issues of responsibility and ethical standards of communication in interpersonal, political, print, TV/film, and electronic communication contexts. Goals of the course include stimulation of the moral imagination; recognition of ethical issues; and development of critical/analytical skills. *Prerequisites: Communication 200, 306 and 400.* (4 units)

502. Legal Aspects of Communication

Exploration and application of laws and regulations as they affect communication. Includes consideration of freedom of speech, libel and slander, intellectual property, broadcast regulations and privacy. *Prerequisite: Communication 306.* (4 units)

509. Computer Mediated Communication

Examination of the use of computer networks for human and mass communication. Formerly a topic under Communication 587. *Prerequisite: Computer Science 124 or equivalent recommended.* (4 units)

581. Contemporary Theories of Rhetoric

Study of 20th century conceptualizations of rhetoric, with an emphasis on contemporary public discourse. (4 units)

584. Topics in Critical Communication

Intensive study of selected topics in critical communication studies. May be repeated for credit as topics change. *Prerequisite: junior or senior standing.* (4 units)

585. Topics in Human Communication

Special topics in human communication. May be repeated for credit as topics change. (4 units)

587. Topics in Mass Communication

Special topics in mass communication. May be repeated for credit as topics change. (4 units)

591. Internship/Externship in Communication

Supervised work and study of communication processes in private and public settings. A total of ten units in Communication 591 may be applied toward graduation. Graded credit/no credit. *Prerequisites: junior or senior status with a minimum of 16 units of communication course work completed on this campus; minimum overall grade point average of 2.5; written consent from a supervising agency within which the internship will take place; departmental approval of a contract between the intern and the supervising agency to be filed prior to the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

595. Independent Study

Special topics involving library research, experimental or field research, or media production. A total of 10 units in Communication 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken, and junior or senior status.* (Credit to be arranged: 2 to 5 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

611. Briefings and Presentations

Preparing and presenting technical briefings and policy proposals from detailed studies for governmental and industrial decision makers as well as for the media. (4 units)

COMPUTER SCIENCE

Accredited by the Computer Science Accreditation Commission of the Computing Sciences Accreditation Board.

Department of Computer Science

Jack Brown Hall, Room 307
880-5326

Bachelor of Science

Computer Science

Minor

Computer Science

Certificate Program

Computer Systems and Programming

Master of Science

Computer Science

(Degree requirements can be found on Page 338)

FACULTY: Richard Botting, Arturo Concepcion, George Georgiou, Dennis Ikenberry, Fook Liu, Josephine Mendoza, Owen Murphy (Chair), Kerstin Voigt, Tong Yu, Kay Zemoudeh

Computer science is a discipline with historical foundations in science, mathematics and engineering. It is concerned with the study of a variety of topics including computer design, computer programming, information processing, data communication, machine intelligence, robotics, the algorithmic solution of problems, and the various representations of information including numeric, alphabetic, visual, audio and sensory. This discipline deals with effective ways to represent and display information, algorithms to process information, languages in which to express algorithms, hardware systems to interpret such languages, theoretical techniques for insuring the accuracy and cost effectiveness of these processes and the philosophical foundations of computing and machine intelligence.

The Bachelor of Science Degree Program is accredited by the Computer Science Accreditation Commission of the Computer Sciences Accreditation Board, a special national accrediting body recognized by the Council on Postsecondary Accreditation and the U.S. Department of Education.

The Minor in Computer Science is designed to give students from all academic disciplines a foundation in computing which will enrich and support the student's own field of study.

The Certificate Program in Computer Systems and Programming is a short course of study provided for those individuals who desire a career in the computer science field which does not require a formal degree.

The Computer Science Department maintains and operates a computer facility which consists of over 120 engineering workstations on the world-wide Internet information superhighway computer network. The facility houses two supercomputers and five file servers supporting over 50 gigabytes of secondary storage for application software and user directories.

To stay ahead in today's increasingly competitive computer marketplace and to broaden each student's computer applications horizon, the department encourages student affiliation with the California State University's International Programs. For further information, see Page 22.

B.S. IN COMPUTER SCIENCE

Requirements (119 units)

Requirements for the B.S. in Computer Science:

Lower-division requirements (53 units)

1. CSci 201. Computer Science I (4)
2. CSci 202. Computer Science II (4)
3. Math 211. Basic Concepts of Calculus (4)
4. Math 212. Calculus II (4)
5. *Four units chosen from:*
 - Math 213. Calculus III (4)
 - Math 251. Multivariable Calculus I (4)
6. *Four units chosen from:*
 - Math 262. Applied Statistics (4)
 - Math 465. Probability Theory (4)
7. Math 272. Discrete Mathematics (4)
8. Phys 221. General Physics I (5)
9. Phys 222. General Physics II (5)
10. Phys 223. General Physics III (5)
11. *Five units chosen from:*
 - Biol 100. Topics in Biology (5)
 - Biol 200. Biology of the Cell (5)
 - HSci 120. Health and Society: An Ecological Approach (5)
12. One additional science course (with lab component), not previously taken, from the following areas:
 - Biology (5)
 - Chemistry (5)
 - Geological Sciences (5)
 - Health Science (5)

Upper-division requirements (46 units)

1. CSci 310. Digital Logic (5)
2. CSci 313. Machine Organization (4)
3. CSci 320. Programming Languages (4)
4. CSci 330. Data Structures (4)
5. CSci 331. Algorithm Analysis (4)
6. CSci 350. File Systems (4)
7. CSci 401. Contemporary Computer Architectures (5)
8. CSci 455. Software Engineering (4)
9. CSci 460. Operating Systems (4)
10. CSci 488. Ethics and the Computing Professional (2)
11. CSci 489. Senior Seminar (2)
12. *Four units chosen from:*
 - Math 331. Linear Algebra (4)
 - Math 372. Combinatorics (4)

Electives (20 units)

1. Theory

Four units chosen from:

- CSci 500. Introduction to Formal Languages and Automata (4)
 CSci 505. Introduction to Theory of Computation (4)
 CSci 515. Automated Reasoning (4)

2. Systems

Four units chosen from:

- CSci 465. Systems Programming (4)
 CSci 470. Compilers (4)
 CSci 480. Data Base Systems (4)

3. Hardware

A minimum of four units chosen from:

- CSci 410. Advanced Computer Architecture (5)
 CSci 430. Data Communications and Networks (4)

4. Eight units chosen from 400- and above level courses not previously counted as electives above.

Note: Students may not count more than five units combined in Computer Science 575 and 595.

MINOR IN COMPUTER SCIENCE

Requirements (28 units)

Requirements for a minor in Computer Science

1. Mathematics

Four units chosen from:

- Math 272. Discrete Mathematics (4)
 Math 372. Combinatorics (4)

2. CSci 201. Computer Science I (4)

3. CSci 202. Computer Science II (4)

4. CSci 330. Data Structures (4)

5. Twelve units of upper-division computer science courses. These units may not include Computer Science 399 or 575.

DEPARTMENTAL HONORS

The department faculty will determine whether a student is to be awarded departmental honors based upon the following criteria:

1. Demonstration of independent work by achieving a grade of "C" (2.0) or better in a four-unit Computer Science 595. Independent Study or credit in Computer Science 575. Internship in Computer Science;
2. Attainment of a minimum overall GPA of 3.0 ("B") in all university courses attempted and a minimum GPA of 3.5 in all computer science courses required by the major (as defined above);
3. At least five computer science courses required by the major must be taken at this university.

Candidacy for honors in computer science is voluntary and must be applied for at the beginning of the senior year. Approval of honors rests solely with the department and other factors may weigh in their judgment.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Computer Systems and Programming

Certificate Requirements (28 units)

1. CSci 201. Computer Science I (4)
2. CSci 202. Computer Science II (4)
3. Computer languages
Eight units chosen from:
 CSci 230. ADA Programming (4)
 CSci 240. FORTRAN Programming (4)
 CSci 250. COBOL Programming (4)
 CSci 251. Advanced COBOL Programming (4)
 CSci 280. Low Level Language (4)
 CSci 290. High Level Language (4)
 CSci 298. Application Software Topics (2)
4. Twelve units of upper-division course work to be chosen in consultation with a certificate advisor in the Department of Computer Science. These courses may include:
 CSci 360. System Tools (4)
 CSci 365. Systems Administration (4)
 CSci 366. Systems Networking (4)

COURSE OFFERINGS IN COMPUTER SCIENCE (CSci)

Lower Division**121. Computer Technology and People (FWS)**

Computer technology: background, contemporary uses, implications and trends, impact on society and ethics. No previous computer background required. May not be taken for credit by students who have received credit for Computer Science 100, 120 or 127. (2 units)

123. Using Computer Software (FWS)

Word processor, spreadsheet, and data base as an aid to personal productivity. One hour lecture and two hours laboratory. No previous computer background required. May not be taken for credit by students who have received credit for Computer Science 100 or 127. (2 units)

124. Exploring the Information Superhighway (FWS)

Familiarization with software tools and techniques that are used to tap into the vast information resources of the Internet. Such software tools include archie, electronic mail, ftp,

gopher, netfind, netnews, telnet, wais, whois, and www. One hour lecture and two hours laboratory. (2 units)

125. Programming in BASIC

Beginners All-purpose Symbolic Instruction Code (BASIC). One hour lecture and two hours laboratory. No previous computer background required. May not be taken for credit by students who have received credit for Computer Science 120. *Prerequisite: satisfactory score on the Entry Level Mathematics examination.* (2 units)

126. Advanced BASIC Programming

Advanced features and application of BASIC. Students will write programs using advanced skills including peeks and pokes, simulations, matrices and file handling. *Prerequisite: Computer Science 125.* (2 units)

127. Introduction to Computer Technology for Educators (FWS)

Operations, terminology and components. Implications for a democratic society, impacts on quality-of-life including economics, morality, legality and ethics. Hands-on use of computers for word processing, etc. Three hours lecture and two hours laboratory. No programming involved. No previous computer experience required. May not be taken for credit by students who have received credit for Computer Science 100, 121 and 123. (4 units)

201. Computer Science I (FWS)

Computer software design, implementation, methods and environments using a current high-level language. Survey of computers, applications and other areas of computer science. Three hours lecture and two hours activity laboratory. *Prerequisite: satisfactory score on the Entry Level Mathematics examination, some prior computer programming experience, or Computer Science 121 and 125.* (4 units)

202. Computer Science II (FWS)

Analysis of problems and the formulation, documentation and implementation of their solutions; an introduction to data structures with abstract data types; software engineering principles for both individual and group projects. Three hours lecture and two hours activity laboratory. *Prerequisites: Computer Science 201 and satisfactory score on the Entry Level Mathematics examination.* (CAN CSCI 24) (4 units)

230. ADA Programming

ADA programming language with emphasis on the techniques of programming in the large including data objects, tasks, and packages. Formerly Computer Science 290A. *Prerequisite: Computer Science 202.* (4 units)

240. FORTRAN Programming

FORTRAN language with emphasis on computer solution of problems reducible to algebraic models and elementary numerical methods. *Prerequisites: Mathematics 211 and either some computer programming experience or both Computer Science 121 and 125.* (CAN CSCI 4). (4 units)

250. COBOL Programming

COBOL language with emphasis on applications to data processing including file processing techniques. *Prerequisite: Computer Science 125, 140, or 202.* (CAN CSCI 8). (4 units)

251. Advanced COBOL Programming

Applications of COBOL programming in information processing. Data storage devices and techniques and I/O operations for sequential, direct and indexed file organizations. Microcomputer and mainframe topics with respect to COBOL implementations. *Prerequisite: Computer Science 250.* (4 units)

280. Low Level Language

Study of the assembly language for selected processors such as 8086/88, 68000, PDP II, VAX II, etc. May be repeated twice for credit as topics change. *Prerequisite: Computer Science 202.* (4 units)

290. High Level Language (FWS)

Study of a selected high-level programming language, such as ADA, C, C++, Prolog or LISP. May be repeated for credit as topics change. *Prerequisite: Computer Science 202.* (4 units)

295. Computer Science Project

Production of documented computer programs under the direction of a faculty member. May be repeated twice for credit using different projects. *Prerequisites: a minimum overall GPA of 3.0, consent of instructor, and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

298. Application Software Topics

Applications software in areas such as word processing, data base, graphics, desk top publishing, planning and communications will be examined under specific operating systems. This is a how-to course and hands-on experience will be stressed. May be repeated for credit as topics change. No previous computing experience is required. One hour lecture and two hours laboratory. Graded credit/no credit. (2 units)

Upper Division

310. Digital Logic (FS)

Boolean algebra, flip-flops, combinational and sequential circuits, arithmetic-logic units, memory devices, and I/O peripherals. Laboratory experiments include bread-board assembly of finite state machine circuits, registers and arithmetic-logic processors. Four hours lecture and three hours laboratory. *Prerequisites: Computer Science 202, Mathematics 272 and Physics 222.* (5 units)

313. Machine Organization (FW)

Typical components of von Neumann computer architectures; their organization, interrelated activities and control are emphasized and demonstrated using low-level languages. Three hours lecture and two hours activity laboratory. Formerly Computer Science 260. *Prerequisite: Computer Science 310.* (4 units)

320. Programming Languages (WS)

Topics include formal language specification, data types and their implementation, abstract mechanisms, control structures, run-time representations and storage management. Several high-level languages will be examined. Three hours lecture and two hours activity laboratory. *Prerequisite: Computer Science 202.* (4 units)

330. Data Structures (FW)

Abstract data structures including lists, stacks, queues and trees; their storage allocation and associated application algorithms. *Prerequisites: Computer Science 202 and Mathematics 272.* (4 units)

331. Algorithm Analysis (W)

Topics include design, implementation and analysis of algorithms for the sorting and searching tasks. Emphasis on measures of time and space complexity, graph theory and its applications. *Prerequisites: Computer Science 330, and Mathematics 272 and 372 or 465.* (4 units)

350. File Systems (FS)

Topics include file structures, file organization concepts and philosophies. *Prerequisite: Computer Science 330.* (4 units)

360. System Tools (F)

Getting started; terminal types; e-mail; command line and GUI interfaces; advanced editing; macros; text processing and programmer's tools. Two hours lecture and four hours activity laboratory. *Prerequisite: Computer Science 202.* (4 units)

365. Systems Administration (W)

Responsibilities and skills of the system administrator; managing accounts, system files and mail; security, reliability and backups; emergencies; ethics and usability. Three hours lecture and two hours activity laboratory. *Prerequisite: Computer Science 360.* (4 units)

366. Systems Networking (S)

Planning and configuring networks; file transfer; network file servers; bridges and routers. Three hours lecture and two hours activity laboratory. *Prerequisite: Computer Science 360.* (4 units)

399. Community Service Project

Credit for performing academically related tasks in such agencies as educational, governmental and social service institutions. May be repeated for a total of six units. No more than six units of credit for Community Service Project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisite: consent of department.* (Credit to be arranged: 1 or 2 units)

401. Contemporary Computer Architectures (S)

Design methodology; processor units and control units of von Neumann computer architectures; RISC architectures, including pipelining and parallel-processing. Laboratory experiments consist of the use of computer-aided design tools for VLSI layout and simulation. Four hours lecture and three hours laboratory. Formerly Computer Science 311. *Prerequisite: Computer Science 313 (or 260).* (5 units)

410. Advanced Computer Architecture (F)

High performance computer architectures and algorithms. Topics include pipeline, vector, array, multi-processor computer designs, applications, and programming. Also covered are data flow and systolic machines, interconnection networks, and graph and parallel graph algorithms. Four hours lecture and three hours software laboratory. *Prerequisite: Computer Science 401 (or 311).* (5 units)

411. Artificial Intelligence (F)

Problems and issues of artificial intelligence, current techniques and methods, and future prospects of machine intelligence. *Prerequisite: Computer Science 330.* (4 units)

420. Computer Graphics (W)

Survey of computer graphics hardware. Topics include animation, two-dimensional and three-dimensional transformation, hidden surface removal algorithm, business charts and applications. *Prerequisites: Computer Science 310, 313 (or 260) and 330.* (4 units)

430. Data Communications and Networks (S)

Topics include baseband and broadband signals and modulation schemes. Error detecting and correcting codes, ISO protocol standard, packet switching and various local network schemes. *Prerequisites: Computer Science 313 (or 260) and 330.* (4 units)

455. Software Engineering (W)

Advanced techniques and technology used to produce large software systems. Laboratory work with a software development environment. Three hours lecture and three hours laboratory. *Prerequisite: Computer Science 330.* (4 units)

460. Operating Systems (S)

An overview of operating systems. Principles of resource management and control. Multiprogramming, distributed systems and multiprocessor systems will be included. Three hours lecture and two hours activity laboratory. *Prerequisites: Computer Science 313 (or 260) and 330.* (4 units)

465. Systems Programming (F)

Concepts of, and implementation techniques for systems software such as assemblers, editors, interpreters, linkers, loaders and operating systems. Formerly Computer Science 450. *Prerequisite: Computer Science 460.* (4 units)

470. Compilers (S)

Interpreter and compiler structures. Topics include symbol tables, lexical and syntactic scanners, and object code generation. Three hours lecture and two hours activity laboratory. *Prerequisites: Computer Science 313 (or 260), 320 and 330.* (4 units)

480. Data Base Systems (W)

Basic concepts of data base and the different approaches to data base organization—relational, network and hierarchical. Discusses storage structures necessary for an implementation of a data base design and provides "hands-on" application on one or more commercial data base management systems. Three hours lecture and two hours activity laboratory. *Prerequisite: Computer Science 350.* (4 units)

488. Ethics and the Computing Professional (F)

Professionalism, ethics, legal issues and the social impact and role of computer technology. *Prerequisite: senior standing.* (2 units)

489. Senior Seminar (S)

A series of weekly seminars covering a wide range of computer science topics and formats including presentations from industry and university personnel, and students regarding projects and research work. Graded credit/no credit. Formerly Computer Science 405. *Prerequisite: completion of all required 300-level computer science courses for the B.S. in Computer Science degree.* (2 units)

492. Topics in Computer Science

Consideration of a selected area of computer science. May be repeated for credit as topics change. Formerly Computer Science 490, credit may not be received twice for the same topic. *Prerequisites: Computer Science 331 and consent of instructor.* (2 units)

494. Topics in Computer Science

An in-depth consideration of selected areas of computer science. May be repeated for credit as topics change. Formerly Computer Science 490, credit may not be received twice for the same topic. *Prerequisites: Computer Science 331 and consent of instructor.* (4 units)

500. Introduction to Formal Languages and Automata (S)

Introduction to formal language theory. Finite state machines, regular grammars, context-free grammars, context-sensitive grammars, push-down automata, closure properties. *Prerequisite: Computer Science 331 or consent of instructor.* (4 units)

505. Introduction to Theory of Computation (F)

Deterministic and non-deterministic Turing machines, decidable and undecidable problems, complexity classes P and NP. *Prerequisite: Computer Science 331.* (4 units)

511. Expert Systems

Expert systems components, problems and applications. Knowledge bases, inference "engines," and their integration within expert systems. Tools for building expert systems, system algorithms as related to hardware, implementation languages and examples of systems in operation. *Prerequisite: Computer Science 330.* (4 units)

515. Automated Reasoning (W)

Study of deduction algorithms for expert systems and the limitations thereof, propositional calculus, quantification theory, completeness and incompleteness theorems, Hebrand-Godel computability, resolution principle, equality and inequality relations. *Prerequisite: Computer Science 331.* (4 units)

520. Advanced Computer Graphics

Advanced computer graphics concepts, theory and implementation techniques. Topics include shading models, parametric curves and surfaces, hidden edge and surface removal, and anti-aliasing. *Prerequisites: Computer Science 420, Mathematics 331 and either Mathematics 213 or 251.* (4 units)

540. System Simulation

Theory and implementation of computerized modeling. Examples will include administrative, physical and biological systems. *Prerequisite: Computer Science 330 or consent of instructor.* (4 units)

575. Internship in Computer Science

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and department.* (5 units)

580. Advanced Data Base Systems

Advanced description: advanced study of components of general data base systems and other topics such as implementation methods, query language design, reliability, integrity, performance measures, distributed database systems and database machines. *Prerequisite: Computer Science 480.* (4 units)

595. Independent Study

Laboratory and/or library research conducted under the direction of a faculty member. A total of five units in Computer Science 595 may be applied toward the computer science major. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

CRIMINAL JUSTICE

Department of Criminal Justice

Faculty Office Building, Room 144
880-5506

Bachelor of Arts

Criminal Justice
Paralegal Studies Option

Minor

Criminal Justice

Master of Arts

Criminal Justice
(Degree requirements can be found on Page 346.)

Certificate Program

Criminal Justice
Paralegal Studies
(Paralegal Studies Certificate requirements can be found on Page 254.)

FACULTY: Frances Coles, Charles Fields (Chair),
Paul Guymon, Marilyn McShane, Dale Sechrest,
David Shichor, Carl Wagoner, Frank Williams

A system of criminal justice must meet the needs of each individual citizen as well as the needs of complex social, economic and governmental institutions. The Bachelor of Arts degree program in criminal justice was developed with these needs in mind and is appropriate for both career-bound preservice students and inservice personnel in law enforcement, probation, parole, corrections, social service agencies and related areas.

In addition, the program is designed to provide students with an appropriate academic background for continuing into graduate studies in criminal justice or pursuing graduate study in other areas such as law or criminology.

The criminal justice major is an interdisciplinary program with enough flexibility to permit students to pursue their own interests. For example, students wishing to emphasize law enforcement may select particularly appropriate courses within the major and are encouraged to minor in administration, political science or sociology. Students directed toward probation, parole or corrections work are advised to select courses accordingly and to take electives in psychology or sociology.

The paralegal studies option is designed to prepare and qualify students as paralegals in the public and private sectors. An indepth description of paralegal studies can be found on page 254.

B.A. IN CRIMINAL JUSTICE

Requirements (80 units)

Requirements for the B.A. in Criminal Justice:

Lower-division requirements—prerequisites for upper-division courses (10 units)

1. CJus 100. Resources in Criminal Justice (2)
2. CJus 101. Introduction to the Criminal Justice System (4)
3. CJus 102. Criminal Law (4)

Note: Students transferring from community colleges may substitute selected administration of justice and corrections courses for Criminal Justice 101, 102 and 103 and may be given lower-division credit toward the major for two additional courses.

Upper-division requirements (38 units)

1. CJus 303. Criminal Justice Administration (4)
2. CJus 304. Procedure and Evidence (4)
3. CJus 311. Research Methods in Criminal Justice (4)
4. CJus 312. Statistics in Criminal Justice (2)
5. CJus 320. Theories of Crime and Delinquency (4)
6. CJus 330. Correctional Theory and Institutions (4)
7. CJus 340. Police and Police Systems (4)
8. CJus 370. Law and the Courts (4)
9. CJus 380. Juvenile Justice System (4)
10. CJus 575. Internship in Criminal Justice (4)

Thirty-two units of electives chosen from:

- | | |
|-----------|---|
| CJus 103. | Critical Issues in Criminal Justice (4) |
| CJus 354. | Victimology (4) |
| CJus 355. | Organized Crime (4) |
| CJus 356. | Crimes Without Victims (4) |
| CJus 360. | Crime and Social Policy (4) |
| CJus 361. | Comparative Criminal Justice Systems (4) |
| CJus 420. | Comparative Criminology (4) |
| CJus 430. | Correctional Administration (4) |
| CJus 431. | Community Corrections (4) |
| CJus 435. | Correctional Counseling (4) |
| CJus 440. | Police Administration (4) |
| CJus 441. | Community Policing (4) |
| CJus 451. | Women and Crime (4) |
| CJus 452. | Occupational and Corporate Crime (4) |
| CJus 460. | Alcohol, Drugs and the Criminal Justice System (4) |
| CJus 462. | Family Violence (4) |
| CJus 466. | Justice and the Media (4) |
| CJus 541. | Administrative Crime Analysis (4) |
| CJus 542. | Investigative Crime Analysis (4) |
| CJus 550. | Criminal Justice Information Systems Management (4) |
| CJus 590. | Seminar in Criminal Justice (4) |
| CJus 595. | Independent Study (1-4) |
| CJus 597. | Senior Honors Project (4) |

Note: With consent of department committee, eight upper-division units in related fields may be substituted for eight units of the elective requirement.

B.A. IN CRIMINAL JUSTICE— PARALEGAL STUDIES OPTION

Requirements (80 units)

Requirements for the B.A. in Criminal Justice —Paralegal Studies Option:

Lower-division requirements—prerequisites for upper-division courses (14 units)

1. CJus 100. Resources in Criminal Justice (2)
2. CJus 101. Introduction to the Criminal Justice System (4)
3. CJus 102. Criminal Law (4)
4. PlSt 100. Introduction to Law (4)

Note: Students transferring from community colleges may substitute selected administration of justice, corrections, and paralegal courses for Criminal Justice 101, 102 and Paralegal Studies 100.

Upper-division requirements (42 units)

1. CJus 303. Criminal Justice Administration (4)
2. CJus 304. Procedure and Evidence (4)
3. CJus 311. Research Methods in Criminal Justice (4)
4. CJus 312. Statistics in Criminal Justice (2)
5. CJus 320. Theories of Crime and Delinquency (4)
6. CJus 330. Correctional Theory and Institutions (4)
7. CJus 340. Police and Police Systems (4)
8. CJus 370. Law and the Courts (4)
9. CJus 380. Juvenile Justice System (4)
10. PlSt 385. Legal Research (4)
11. PlSt 386. Legal Writing (4)

Electives (24 units)

Twenty-four units chosen from:

- PlSt 370. Wills, Estates and Trusts (4)
- PlSt 371. Contract Law (4)
- PlSt 372. Tort Law (4)
- PlSt 373. Property Law (4)
- PlSt 376. Family Law (4)
- PlSt 377. Trial Practice (4)
- PlSt 378. Corporate Law (4)
- PlSt 380. Criminal Law (4)
- PlSt 381. Sex Discrimination and the Law (4)
- PlSt 383. Worker's Compensation (4)
- PlSt 384. Immigration Law (4)
- PlSt 388. Environmental Law (4)
- PlSt 575. Internship in Paralegal Studies (4)
- PlSt 595. Independent Study (1-4)

MINOR IN CRIMINAL JUSTICE

Requirements (28 units)

Requirements for a minor in Criminal Justice:

1. CJus 101. Introduction to the Criminal Justice System (4)
2. CJus 102. Criminal Law (4)
3. CJus 303. Criminal Justice Administration (4)
4. CJus 304. Procedure and Evidence (4)
5. *Twelve units chosen from:*
 - CJus 320. Theories of Crime and Delinquency (4)
 - CJus 330. Correctional Theory and Institutions (4)
 - CJus 340. Police and Police Systems (4)
 - CJus 370. Law and the Courts (4)

HONORS IN THE MAJOR

Students majoring in criminal justice are eligible to receive honors in criminal justice at graduation if the following conditions are met:

1. At least one-half of the course work required by the major is completed at this university;
2. At least a 3.5 grade point average in the major;
3. An overall undergraduate grade point average of 3.0 ("B");
4. Completion of Criminal Justice 597. Senior Honors Project.

Students interested in receiving this recognition must initiate the process by filing a formal application with the chair of the Criminal Justice Department.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. See Page 66 for further certificate requirements.

Certificate in Criminal Justice

Certificate requirements (32 units)

1. CJus 101. Introduction to the Criminal Justice System (4)
2. CJus 102. Criminal Law (4)
3. *Four units chosen from:*
 - CJus 103. Critical Issues in Criminal Justice (4)
 - CJus 380. Juvenile Justice System (4)
4. CJus 303. Criminal Justice Administration (4)
5. CJus 304. Procedure and Evidence (4)
6. CJus 320. Theories of Crime and Delinquency (4)
7. *Four units chosen from:*
 - CJus 330. Correctional Theory and Institutions (4)
 - CJus 340. Police and Police Systems (4)
8. CJus 370. Law and the Courts (4)

COURSE OFFERINGS IN CRIMINAL JUSTICE (CJus)

Lower Division

100. Resources in Criminal Justice

A study of data and literature sources in criminal justice. Includes familiarization with library resources, explanation of writing requirements, discussion of citation models and approaches to test taking. This course must be completed no later than the second quarter a student is enrolled at California State University, San Bernardino as a criminal justice major. (2 units)

101. Introduction to the Criminal Justice System

A descriptive overview of the adult and juvenile justice system, from the commission of crimes and offenses through sentencing and appeal procedures. Criminal justice standards and goals and the relationship of the social and behavioral sciences to criminal justice will be emphasized. (CAN AJ 2) (4 units)

102. Criminal Law

Historical development of criminal law and its contemporary application. Focus on the interrelationship between criminal law and the criminal justice system. (CAN AJ 4) (4 units)

103. Critical Issues in Criminal Justice

Contemporary problem areas in criminal justice, including topics such as evidence, arrest and detention, search and seizure, the ideology of crime control and criminal justice reform. (4 units)

Upper Division

303. Criminal Justice Administration

Evaluation and analysis of the administration of criminal justice agencies. Emphasis on administrative and managerial principles and techniques as they apply to the criminal justice system. Formerly Criminal Justice 301 and 302. (4 units)

304. Procedure and Evidence

Examination of the rules governing evidence and criminal procedure. Focus on the impact of statutes and case law on criminal justice system practitioners. Included are the 4th, 5th, 6th, 8th and 14th Amendments as they affect the accused, the convicted, and the employees of the criminal justice system. *Prerequisite: Criminal Justice 102 or equivalent.* (4 units)

311. Research Methods in Criminal Justice

Introduction to scientific methodology and research designs used to conduct basic and applied research in the criminal justice field. Emphasis on scientific operationalization, survey methodology, and concepts of evaluation design. (4 units)

312. Statistics in Criminal Justice

Introduction to statistical reasoning and social science statistics commonly used in criminal justice. Includes descriptive, inferential and predictive statistics, with emphasis on interpretation rather than calculation. *Prerequisite: Mathematics 110 or 115 or equivalent.* (2 units)

320. Theories of Crime and Delinquency

Causes of crime and delinquency with emphasis on sociological factors. Formerly Criminal Justice 351. (4 units)

330. Correctional Theory and Institutions

History and theory of punishment; overview of history of correctional institutions; analysis and evaluation of contemporary institutional corrections; consideration of research concerning correctional institutions. Formerly Criminal Justice 358 or Sociology 358. (4 units)

340. Police and Police Systems

Analysis of police, police systems and the police role; limitations imposed on law enforcement in a democratic society in accordance with the Constitution; problems affecting crime control and the interdependence of police and community. A self-paced version of this course (Criminal Justice 340S) is also available. Students may not receive credit for both. Formerly Criminal Justice 357/357A/Sociology 357. (4 units)

354. Victimology

Victim role, criminal-victim relationships, and societal reaction to victimization, including crisis-intervention centers, court related victim/witness services, restitution and compensation. (4 units)

355. Organized Crime

History, development and effects of organized crime in the U.S., relationship of organized crime to political and economic structures, methods of combatting organized crime. (4 units)

356. Crimes Without Victims

Nature, extent and control of "crimes" such as gambling, prostitution, drug use, drunkenness, obscenity, and pornography. (4 units)

360. Crime and Social Policy

Policies and programs for prevention and control of crime and delinquency, including evaluation of specific programs. (4 units)

361. Comparative Criminal Justice Systems

Description and analysis of selected international criminal justice systems. Emphasis on administrative functions, processes and outcomes. (4 units)

370. Law and the Courts

Nature, functions, limitations and objectives of law, criminal courts, civil courts, the grand jury and petit jury, family law, and civil liability for police and correctional officers. Emphasis on practical legal problems confronting criminal justice system workers and administrators. Formerly Criminal Justice 359/Sociology 359. (4 units)

380. Juvenile Justice System

History and development of the juvenile justice system, with special emphasis on delinquency, the juvenile court and other agencies of the juvenile justice system. Formerly Criminal Justice 353. (4 units)

420. Comparative Criminology

A critical examination of criminological theory and research throughout the world. Covers foreign criminological concerns, materials relating to development of the law, differing approaches to definitions of crime, and problems in collection and interpretation of comparative crime data. (4 units)

430. Correctional Administration

In-depth study of the administration and management of correctional agencies. Emphasis on organizational structure, functions and behavioral processes. Formerly Criminal Justice 302. *Prerequisite: Criminal Justice 303 or equivalent.* (4 units)

431. Community Corrections

Issues and trends in community based corrections; alternatives to incarceration including diversion, restitution, community treatment facilities, halfway houses, probation and parole, and such developments as house arrest and electronic surveillance. Special emphasis on the functions, strengths, and problems of community based programs. (4 units)

435. Correctional Counseling

Examination of the history, theory and practice of counseling services within the correctional setting. Topics include rehabilitation (research and application of findings), limitations of counseling, legal liabilities of counselors, and the integration of treatment with other correctional goals. (4 units)

440. Police Administration

In-depth study of the administration and management of law enforcement agencies. Emphasis on organizational structure, functions and behavioral processes. Formerly Criminal Justice 301. *Prerequisite: Criminal Justice 303 or equivalent.* (4 units)

441. Community Policing

Analysis of law enforcement strategies to secure cooperative police-community ventures aimed at enhancing community order and suppressing crime. Consideration of strategies designed to improve public relations. *Prerequisites: Criminal Justice 340, (357, 357A), 440 or equivalent.* (4 units)

451. Women and Crime

A critical study of women as offenders, victims and workers within the criminal justice system. (4 units)

452. Occupational and Corporate Crime

Definition, history, extent, causes, consequences and enforcement methods regarding white collar, occupational and corporate crime in business, the professions, corporations, unions and government. Formerly Criminal Justice 450/Sociology 450. (4 units)

460. Alcohol, Drugs, and the Criminal Justice System

Study of the history and development of criminal justice policy concerning alcohol and illegal drugs; consideration of the manufacture, importation, distribution of illegal drugs; particular emphasis placed on the impact of alcohol and illegal drug use on communities and the criminal justice system. (4 units)

462. Family Violence

Examination of violence in the family setting, including spousal abuse, child abuse and elder abuse; consideration of legal issues and of short term consequences for individuals, families and the community; response and responsibilities of the criminal justice system. (4 units)

466. Justice and the Media

Examination of the relationship between criminal justice and the media, including consideration of the impact of the media on attitudes and perceptions of crime and criminals, the relationship of the media and crime control, and the impact of the media on the operations of the agencies in the criminal justice system. (4 units)

541. Administrative Crime Analysis

Techniques of collecting and analyzing basic crime and police service data for administrative planning and policy. Formerly Criminal Justice 590G. *Prerequisite: Criminal Justice 311.* (4 units)

542. Investigative Crime Analysis

Methods of analyzing investigative crime data for the purpose of identifying criminal behavior systems, criminal profiling and developing theories of crime and testing. Focus on integrating data into information systems (e.g., workload analysis and link analysis). Formerly Criminal Justice 590H. (4 units)

550. Criminal Justice Information Systems Management

Analysis of existing criminal justice information systems and computer applications. Develop user applications to improve operations within and between criminal justice agencies. *Prerequisites: Criminal Justice 311 and 312 or equivalent.* (4 units)

575. Internship in Criminal Justice

Supervised work and study in private or public organizations. May be repeated once for credit. Open only to criminal justice majors. Graded credit/no credit. *Prerequisites: consent of instructor and department.* (4 units)

590. Seminar in Criminal Justice

Special topics in criminal justice. May be repeated for credit with consent of instructor as topics change. *Prerequisite: junior, senior or graduate standing.* (4 units)

595. Independent Study

In-depth research into special topics concerned with the criminal justice system utilizing readings, library and/or field research. A total of eight units in Criminal Justice 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and department chair's approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

597. Senior Honors Project

Original research in an area of criminal justice studies, culminating in a major research report receiving approval of the criminal justice faculty. Enrollment limited to students whose formal application for departmental honors is approved. (4 units)

DANCE

Department of Theatre Arts

Creative Arts Building, Room 111
880-5876

COURSE OFFERINGS IN DANCE (Dan)

Lower Division

200. Studies in Dance

Movement study and body conditioning in specific dance styles. May be repeated for credit up to six units per topic. No more than 12 units may be used to satisfy graduation requirements. *Prerequisite: Physical Education 141 or consent of instructor.*

- A. Jazz (2 units)
- B. Modern (2 units)
- C. Tap (2 units)
- D. Ballet (2 units)

Upper Division

300. Dance Technique

Complex movement technique and artistic interpretation in specific dance styles. May be repeated for credit up to six units per topic. No more than 20 units may be used to satisfy graduation requirements. *Prerequisites: Dance 200 or equivalent experience and consent of instructor.*

- A. Jazz (2 units)
- B. Modern (2 units)
- C. Tap (2 units)
- D. Ballet (2 units)
- E. Musical Theatre (2 units)

355. Dance Notation

Study and application of written notation for the analysis, reading and preservation of dance. One hour lecture and four hours laboratory. *Prerequisite: six units of Dance 300 or consent of instructor.* (3 units)

360. Dance History

Chronological study of major styles and personalities in dance. (4 units)

450. Choreography

Study and application of dance composition. May be repeated for credit. Formerly Dance 350. One hour lecture and four hours laboratory. *Prerequisite: six units of Dance 300 or consent of instructor.* (3 units)

481. Creative Dance in the Classroom

Dance techniques that emphasize concentration, imagination, body awareness and self expression and are designed to develop creative leadership for parents, recreational leaders, elementary and secondary teachers. May not be counted toward fulfilling requirements in the theatre arts major. (4 units)

ECONOMICS

Department of Economics

Faculty Office Building, Room 144
880-5511

Bachelor of Arts

Economics

Minor

Economics
Political Economy

FACULTY: Parviz Asheghian, Jim Charkins, Kazim Konyar, Dick Moss, Eric Nilsson, Tom Pierce, Jerrell Richer, Nancy Rose, Mayo Toruno (Chair)

Whenever a choice must be made between alternatives—whether a personal decision to study math or play ball, or a governmental decision whether to spend a billion dollars on the space program or on schools—there are economic ramifications. Individuals, business, government and other social institutions must, if they are to use resources wisely, consciously consider economic factors in making decisions. As a social science, economics also studies the way in which social, political and cultural factors influence this decision-making process. The use of economic principles enables individuals and organizations to analyze problems in an orderly manner and to make sound choices about the economic desirability of a program or activity.

Training in economics, supplemented by course work in other disciplines, provides excellent preparation for particular careers in industry, government and many professions including management, law, education, public administration or consulting. Because economic problems are encountered everywhere and touch everyone's life, the study of economics also provides useful intellectual training for individuals who may be uncertain about their future plans.

B.A. IN ECONOMICS

Requirements (61-62 units)

Requirements for the B.A. in Economics:

Lower-division requirements (16 units)

1. Econ 200. Principles of Microeconomics (4)
2. Econ 202. Principles of Macroeconomics (4)
3. Math 110. College Algebra (4)
4. Choose one of the following:
 - MSci 210. Applied Business Statistics (4)
 - Math 305. Statistics: Hypothesis Testing and Estimation (4)

Upper-division requirements (45 or 46 units)

1. Econ 300. Intermediate Macroeconomics (4)
2. Econ 302. Intermediate Microeconomics (4)
3. Econ 335. Economic Analysis with Microcomputers (5)
4. Econ 421. Economic History of the United States (4)
5. Econ 430. International Economics (4)

6. Econ 500. History of Economic Thought (4)
7. Four or five units chosen from:
 - Econ 322. Managerial Economics (4)
 - Econ 340. Advanced Economic Analysis with Microcomputers (4)
 - Econ 372. Business Cycles (5)
 - Econ 480. Introduction to Mathematical Economics (4)
 - Econ 490. Introduction to Econometrics (4)
8. Four units chosen from:
 - Econ 360. Economics of the Environment (4)
 - Econ 410. Money and Banking (4)
 - Econ 460. Labor Economics (4)
 - Econ 475. Public Finance (4)
9. Four units chosen from:
 - Econ 333. Women in the Economy (4)
 - Econ 352. The Economics of Poverty and Discrimination (4)
 - Econ 420. Comparative Economic Systems (4)
 - Econ 445. Political Economy (4)
 - Econ 450. Economic Development (4)

10. Eight units of additional upper-division economics courses. With approval of a departmental advisor, eight units in related fields may be counted toward the upper-division course requirement in economics.

Note: In addition to the course requirements stated above, students considering graduate study in economics are urged to complete the following courses: Economics 480 and 490, Mathematics 211, 212, 251 and 331.

B.A. IN ECONOMICS - SOCIAL SCIENCE CREDENTIAL OPTION

Requirements (130-131 units)

Students who complete this program will be recommended for a Single Subject Credential in Social Science, which authorizes an individual to teach history, economics, and social science classes in California public schools.

Requirements for the B.A. in Economics-Social Science Credential Option:

Lower-division requirements (65 units)

1. Anth 102. Introduction to Anthropology (4)
2. Four units chosen from:
 - Anth 140. World Civilization I, the Rise of Civilization (4)
 - Hist 140. World Civilization I, the Rise of Civilization (4)
3. Econ 104. Economics of Social Issues (4)
4. Econ 200. Principles of Microeconomics (4)
5. Econ 202. Principles of Macroeconomics (4)
6. Four units chosen from:
 - Geog 100. Introduction to Human Geography (4)
 - SSci 165. Regions and Peoples of the World (4)
 - 7. Geog 103. Physical Geography (5)
 - 8. Hist 142. World Civilizations II, the Civilizations of the East and West (4)

9. Hist 144. World Civilization III, the Expansion of Europe (4)
10. Hist 200. U.S. History to 1877 (4)
11. Hist 201. U.S. History 1877 to the Present (4)
12. *Four units chosen from:*
 MSci 210. Applied Business Statistics (4)
 Math 305. Statistics: Hypothesis Testing and Estimation (4)
13. Math 110. College Algebra (4)
14. PSci 203. American Government (4)
15. Psyc 100. Introduction to Psychology (4)
16. Soc 100. The Study of Society (4)
- Upper-division requirements (65 or 66 units)*
1. Econ 300. Intermediate Macroeconomics (4)
 2. Econ 302. Intermediate Microeconomics (4)
 3. Econ 310. Economics in the Classroom (4)
 4. Econ 335. Economic Analysis with Micro-computers (5)
 5. Econ 352. Economics of Poverty and Discrimination (4)
 6. Econ 421. Economic History of the United States (4)
 7. Econ 430. International Economics (4)
 8. Econ 500. History of Economic Thought (4)
9. *Four units chosen from:*
 Econ 420. Comparative Economic Systems (4)
 Econ 435. Multinational Corporations (4)
 Econ 450. Economic Development (4)
10. *Four or five units chosen from:*
 Econ 322. Managerial Economics (4)
 Econ 372. Business Cycles (5)
 Econ 480. Introduction to Mathematical Economics (4)
 Econ 490. Introduction to Econometrics (4)
11. *Four units chosen from:*
 Econ 360. Economics of the Environment (4)
 Econ 410. Money and Banking (4)
 Econ 475. Public Finance (4)
12. Geog 302. Geography of California (4)
13. Hist 370. History of California (4)
14. PSci 330. State and Local Government (4)
15. *Four units chosen from:*
 Hist 300. Early Modern Europe, the Renaissance to 1815 (4)
 Hist 301. Modern Europe, 1815 to the Present (4)
 Hist 331. Black History I: The African Experience (4)
 Hist 382. History of the Middle East (4)
 Hist 408. The Development of 20th Century Europe, 1890-1945 (4)
 Hist 410. Hitler's Europe (4)
 Hist 430. China, 1895-Present (4)
 Hist 434. East Asia Since World War II (4)
 Hist 440. Japan, 1868-Present (4)
 Hist 465. Modern Central America (4)
 Hist 470. Modern Latin America (4)
 Hist 503. Europe Since 1945 (4)
16. *Four units chosen from:*
 Hist 334. Black History II: The American Experience (4)
 Hist 391. Chicano History (4)

- Hist 565. Ethnic Minorities in American History (4)
- Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
- Hist 567. The Asian-American Experience (4)

MINOR IN ECONOMICS

Requirements (32 units)

Requirements for a minor in Economics:

Lower-division requirements (8 units)

1. Econ 200. Principles of Microeconomics (4)
2. Econ 202. Principles of Macroeconomics (4)

Upper-division requirements (24 units)

1. *Four units chosen from:*
 Econ 300. Intermediate Macroeconomics (4)
 Econ 410. Money and Banking (4)
2. *Four units chosen from:*
 Econ 430. International Economics (4)
 Econ 435. Multinational Corporations (4)
 Econ 450. Economic Development (4)
3. Sixteen units of upper-division economics courses to be chosen in consultation with an advisor.

MINOR IN POLITICAL ECONOMY

Requirements (28 units)

Requirements for a minor in Political Economy:

Lower-division requirements (4 units)

1. Econ 202. Principles of Macroeconomics (4)

Upper-division requirements (24 units)

1. Econ 445. Political Economy (4)
2. Econ 447. Post-Keynesian Economic Theory (4)
3. *Sixteen units chosen from:*
 Econ 333. Women in the Economy (4)
 Econ 352. The Economics of Poverty and Discrimination (4)
 Econ 390. Selected Topics in Economics: Political Economy (4)
 Econ 421. Economic History of the United States (4)
 Econ 500. History of Economic Thought (4)
 Econ 590. Seminar in Economics: Political Economy (4)

or other upper-division courses chosen in consultation with an advisor.

BUSINESS ECONOMICS CONCENTRATION

The School of Business and Public Administration offers a concentration in business economics within its Bachelor of Arts degree. Refer to Page 75 for details.

DEPARTMENTAL HONORS

Departmental honors will be awarded upon graduation to students majoring in economics who have:

1. Earned a 3.5 grade point average in all economics courses attempted at this university;
2. Completed at least half of all work in economics at this university;
3. Been recommended for departmental honors by economics faculty.

OMICRON DELTA EPSILON

Students who have completed a minimum of 20 quarter units of economics course work with a grade point average of at least 3.0 ("B") and who also have an overall grade point average of at least 3.0 ("B") may join the university's chapter of Omicron Delta Epsilon, the national honor society in economics. Additional information can be obtained from the Department of Economics.

COURSE OFFERINGS IN ECONOMICS (Econ)

Lower Division

104. Economics of Social Issues

Economic perspectives on social issues. Cannot be counted toward fulfillment of requirements in the economics major. (4 units)

200. Principles of Microeconomics

Introduction to the economic principles which govern production, exchange, the pricing of goods, services and resources and the distribution of incomes in competitive and noncompetitive markets. (CAN ECON 4) (4 units)

202. Principles of Macroeconomics

Introduction to the theory of national income determination with particular emphasis on employment and unemployment, price levels, monetary and fiscal policies, international economic issues and theories of economic growth. *Prerequisite: Economics 200 or consent of instructor.* (CAN ECON 2) (4 units)

Upper Division

300. Intermediate Macroeconomics

Analysis of the problems of measurement and determination of levels of national income, and investigation of macroeconomic policy issues including inflation and unemployment. *Prerequisites: Economics 200, 202 and Mathematics 110.* (4 units)

302. Intermediate Microeconomics

Detailed analysis of economic behavior of consumers and producers in competitive and noncompetitive markets, and of the criteria for achieving optimality in the allocation and use of resources. *Prerequisites: Economics 200 and 202.* (4 units)

305. Intensive Introductory Economics

An intensive introduction to micro- and macroeconomic concepts for graduate students. Not open to students who have received credit for Economics 200 and 202. *Prerequisite: graduate standing.* (4 units)

310. Economics in the Classroom

Economics method of analysis as it applies to contemporary problems. Designed for teachers of elementary children. May not be counted toward fulfilling requirements for the economics major. (4 units)

322. Managerial Economics

Application of microeconomic theory and analysis to business and administrative problems. *Prerequisites: Economics 200, 202, 335 and Mathematics 110.* (4 units)

333. Women in the Economy

Investigation of women's economic status, for example, differentials in income, incidence of poverty and unemployment rates; women's role in the economy; and an examination of proposals affecting women's status. (4 units)

335. Economic Analysis with Microcomputers

Formulation and construction of computer models using economics concepts and principles. Application of models to various economic phenomena, deriving solutions under alternative assumptions. Four hours lecture and two hours laboratory. *Prerequisites: Economics 200, 202 and Mathematics 110.* (5 units)

340. Advanced Economic Analysis with Microcomputers

Application of sophisticated computer software for purposes of economic analysis and modeling. *Prerequisite: Economics 335 or consent of instructor.* (4 units)

352. The Economics of Poverty and Discrimination

Investigation of the incidence of poverty among ethnic and racial minorities, women and the aged in the U.S.; analysis of discrimination and other causes of poverty among these groups; survey of methods for minimizing poverty in the United States. (4 units)

360. Economics of the Environment

Economic causes and implications of air and water pollution, urban congestion, natural resource depletion and population growth; examination of the economic impacts of alternative forms of environmental control and protection. (4 units)

372. Business Cycles

Causes and nature of business fluctuations. Application of macroeconomic theory and cyclical indicators to detect changes in the U.S. economy using the microcomputer as a forecasting tool. Four hours lecture and two hours laboratory. *Prerequisites: Economics 200, 202, 335 and Mathematics 110.* (5 units)

390. Selected Topics in Economics

Examination of selected topics of current interest in economics. May be repeated for credit as topics change. (4 units)

410. Money and Banking

Demand for money, creation and manipulation of the money supply, and the role of banking and other financial institutions in the United States in determining the level of employment, prices and international payments equilibrium. *Prerequisite: Economics 202.* (4 units)

420. Comparative Economic Systems

Comparison of theories and forms of organization of major contemporary economic systems such as those found in command, market-socialism and predominantly free-enterprise economies. *Prerequisite: Economics 202.* (4 units)

421. Economic History of the United States

Economic history of the United States from the founding of the colonies to the present. (Also offered as History 421. Students may not receive credit for both.) (4 units)

430. International Economics

Theories of the causes and effects of trade between nations. Study of government policies which alter the pattern of trade between nations. *Prerequisites: Economics 200, 202 and 302 or consent of instructor.* (4 units)

435. Multinational Corporations

Multinational corporations and the international economic environment in which they operate. Topics include the international monetary system, balance of payments, international capital movements, foreign direct investment, technology transfer, and conflicts between multinational corporations and host countries. *Prerequisites: Economics 200 and 202.* (4 units)

445. Political Economy

Introduction to economic theories which have their heritage in the work of Karl Marx. Topics may include historical materialism, value theory, crisis theory, imperialism, the labor process, and social structures of accumulation. *Prerequisite: Economics 202 or consent of instructor.* (4 units)

447. Post-Keynesian Economic Theory

Study of how the underlying class structure of society shapes economic behavior. Primary focus on the work of the Post-Keynesians, Kaleckians, and Neo-Ricardians. *Prerequisite: Economics 202.* (4 units)

450. Economic Development

Economic problems confronting developing countries; policies hypothesized to achieve desired rates of economic development in these areas. (4 units)

460. Labor Economics

Micro- and macroeconomic aspects of labor markets including the workings of labor markets in competitive and noncompetitive markets, structure and causes of unemployment, incomes policies, and selected institutional topics including the economics of U.S. labor movements. *Prerequisite: Economics 200.* (4 units)

475. Public Finance

Rationale for government actions in an economy which emphasizes private sector allocation; principles of taxation, theories of tax incidence, expenditure evaluation, government sources and

uses of revenue, and government budgeting. *Prerequisite: Economics 200 or consent of instructor.* (4 units)

480. Introduction to Mathematical Economics

Application of mathematical concepts and techniques to economic models of optimization by consumers and producers, to models of price determination and to the study of input-output techniques. *Prerequisites: Economics 200 and Mathematics 211.* (4 units)

490. Introduction to Econometrics

Various statistical methods of testing economic hypotheses. *Prerequisites: Economics 200, 202, Mathematics 110, and Management Science 210, or equivalent.* (4 units)

500. History of Economic Thought

Survey of the development of economic doctrines and analyses and concurrent intellectual and social history with emphasis on the ideas of landmark economists from Adam Smith to John Maynard Keynes. *Prerequisite: Economics 200.* (4 units)

575. Internship in Economics

Supervised work in public or private organizations emphasizing practical applications of economic concepts and relationships. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and departmental approval of a written proposal submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (4 units)

590. Seminar in Economics

Intensive study of some phase of economics. May be repeated for credit as subject matter changes and with consent of instructor. (4 units)

595. Independent Study

Investigation of special topics not covered by the department's curricular offerings. A total of eight units in Economics 595 may be applied toward the major and graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Proseminar in Economics

Survey of the concepts and ideas that economists study, how they approach the study of economic phenomena, and what methods they employ in their analysis. The seminar will include discussion of the relationships of the discipline to other social science disciplines and the unique contributions economics has made to knowledge in general and in the social sciences. *Prerequisite: consent of instructor.* (4 units)

630. International Economic Issues

Contemporary international economic issues of relevance in planning and implementing policy. (4 units)

EDUCATION

School of Education

Faculty Office Building, Room 182
880-5600

Center for Assisting Students in Education (C.A.S.E.)

Credentials Office

Pfau Library, Room 241, 880-5609

Credential Admission and Student Teaching

Placement Office

Pfau Library, Room 268, 880-5604

Basic Teaching Credential Programs

Multiple Subject Crosscultural, Language and Academic Development (CLAD)

Multiple Subject Crosscultural, Language and Academic Development (CLAD) (Intern Track) or Multiple Subject Bilingual Crosscultural, Language and Academic Development (BCLAD) (Intern Track)

Multiple Subject Bilingual Crosscultural, Language and Academic Development (BCLAD)

Single Subject

Single Subject (CLAD)

Single Subject (Intern Track)

Designated Subjects

Specialist and Services Credential Programs

Adapted Physical Education Specialist

Administrative Services (Preliminary)

Administrative Services Preliminary (Internship)

Administrative Services (Professional)

Bilingual/Cross-Cultural Specialist

Pupil Personnel Services

Reading/Language Arts Specialist

School Psychologist Services Credential (Intern Track)

Special Education Specialist: Mild to Moderate Disabilities

Special Education Specialist: Moderate to Severe Disabilities

Supervision and Coordination of Designated Subjects Programs

(*Credential requirements can be found on Page 365.*)

Master of Arts in Education

with options in:

Bilingual/Cross-Cultural

Educational Counseling

Elementary Education

Environmental Education

Instructional Technology

Middle Grades Education

Reading/Language Arts

Secondary Education

Secondary Education with History, English, Physical Education or Spanish Options

Special Education

Teaching English as a Second Language

Vocational Education

(*Degree requirements can be found on Page 349.*)

Master of Arts

Educational Administration

(*Degree requirements can be found on Page 386.*)

Rehabilitation Counseling

(*Degree requirements can be found on Page 415.*)

Master of Science

Counseling and Guidance

(*Degree requirements can be found on Page 342.*)

Certificate Programs

Community College Counseling

Education of the Gifted and Talented

Educational Computing

Educational Technology

Environmental Education

Language Development Specialist

Middle Grade Education

Reading/Language Arts for the Classroom Teacher

Reading Recovery Teacher Leader

Reading Recovery in Spanish/Descubriendo La Lectura (DLL) Teacher Leader

Rehabilitation Counseling

Remedial Education in the Elementary School

School Business Management

Study Strategy Instruction for Secondary Schools

(*Certificate requirements can be found on Page 371.*)

Specialist Certificate Program

Resource Specialist in Special Education

(*Specialist certificate requirements can be found on Page 374.*)

Vocational Education

Bachelor of Vocational Education

Bachelor of Science

(*Degree requirements can be found on Page 311.*)

Department of Elementary and Bilingual Education

Faculty Office Building, Room 124, 880-5603

FACULTY: Billie Blair (Chair), Sam Crowell, Esteban Diaz, Lynne Diaz-Rico, Barbara Flores, Ernest Garcia (Emeritus), Richard Griffiths, Jose Hernandez, Todd Jennings, Joseph Jesunathadas, Kenneth Johns, Patricia Kelly, Ellen Kronowitz, James Mason, Patrick Mullen, Gary Negin, Ruth Norton, Iris Riggs, Sylvester Robertson, Ruth Sandlin, Rowena Santiago, Mary Jo Skillings, Sue Spitzer, Helena Stanton, Kathy Weed, Jan Woerner

Department of Secondary and Vocational Education

Faculty Office Building, Room 139, 880-5650

FACULTY: Brian Arnold, Maria Balderrama, Bonnie Brunkhorst, Herbert Brunkhorst, Renate Caine, Susan Cooper, Rosalie Giacchino-Baker, Juan Gutierrez, Francisco Hidalgo, Irvin Howard, Sherry Howie, Ron Pendleton, Robert Senour, Eleonora Sztaray, Alvin Wolf (Acting Chair), Theodore Zimmerman

Department of Advanced Studies in Education

Faculty Office Building, Room 126, 880-5606

FACULTY: Richard Ashcroft, Stephen Bowles, Susan Brotherton, Katharine Busch, William Camp (Chair), Margaret Cooney, Carolyn Eggleston, Joanne Eichinger, Cheryl Fischer, Louise Fulton, Thom Gehring, Cristina Gomez-Valdez, Rosa Gonzalez, Joseph Gray, Mildred Henry, Adria Klein, Kenneth Lane, Barbara Larivee, Marjorie McCabe, Jeff McNair, Kathryn Reilly, David Stine, Darleen Stoner, Stanley Swartz, Dwight Sweeney, Patricia Tefft Cousin, Arthur Townley, Joseph Turpin, Steven Wagner, Dudley Wiest

The School of Education offers course work designed to prepare students for a variety of careers in education. At the present time, the university is approved to offer the following credentials through the Departments of Elementary and Bilingual Education and Secondary and Vocational Education:

- A. Multiple Subject Crosscultural, Language and Academic Development (CLAD) Credential for teaching in a self-contained classroom (K-12),
- B. Multiple Subject Crosscultural, Language and Academic Development (CLAD) or Multiple Subject Bilingual Crosscultural, Language and Academic Development (BCLAD) Credential (intern track) for teaching in a self-contained classroom (all grades),
- C. Multiple Subject Bilingual Crosscultural, Language and Academic Development (BCLAD) Credential for teaching in a self-contained classroom (K-12),
- D. Single subject credential with a crosscultural, language and academic development emphasis (CLAD) for teaching a single subject in a departmentalized school (all grades),
- E. Single subject credential for teaching a single subject in a departmentalized school (all grades),
- F. Single subject credential (intern track) for teaching a single subject in a departmentalized school (all grades),
- G. Designated subjects teaching credential for technical, trade or vocational subjects or adult education. For information concerning the Bachelor of Vocational Education and the Bachelor of Science in Vocational Education see Page 311.

In general, students electing to pursue an emphasis in elementary teaching should undertake one of the multiple subject credentials. Students wishing to follow an emphasis in secondary teaching should pursue the single subject credential.

Information on graduate programs in education can be found in the graduate studies section beginning on Page 341. These include the master of arts in education, specialist and services credential programs, certificate programs and specialist certificate programs.

The school offers a program leading to the Bachelor of Vocational Education and the Bachelor of Science in Vocational Education. Further information about these degrees is provided on Page 349.

BASIC TEACHING CREDENTIALS

MULTIPLE SUBJECT CROSSCULTURAL, LANGUAGE, AND ACADEMIC DEVELOPMENT (CLAD) CREDENTIAL PROGRAM Requirements (52 units)

Admission to the university must precede admission to the basic credential program. In preparation for admission to

the basic credential program, students must enroll in Elementary Education 321. At the first class session, Program Admission Files (PAF) are presented and information on the application procedures is provided.

Application to the program is to be submitted to the Credential Program Admissions Office during Elementary Education 321 coursework. Students are to successfully complete Elementary Education 321 in preparation for admission to the program.

Admission to the Program

One quarter in advance of the time students intend to enroll in Elementary Education 331, 332, and 333, students must submit Program Admission Files. The PAF is submitted to the Credential Program Admissions Office by Friday of the fifth week of the quarter prior to enrolling in any of the above courses. (No applications are accepted in the summer quarter.)

Students are particularly advised to complete the required California Basic Educational Skills Test (CBEST) and, if necessary, the PRAXIS series examination (credential must be completed within five years of taking the examination). Students must provide verification of passing scores on these exams when they apply for admission to Phase III: Student Teaching.

Admission to the basic credential program is based on the following criteria and conditions:

1. Three written recommendations, at least two from faculty members in the student's major department;
2. Meet with and obtain signature of assigned Elementary Education advisor on advising form;
3. Verification of a negative tuberculin examination within the last 24 months;
4. Audiovisual clearance from Audiovisual Services;
5. Academic achievement;
 - A. Applicants must possess the following minimum grade point averages:
 1. Liberal studies majors will be held to the 50th percentile (2.89 for graduates of California State University, San Bernardino) for their cumulative undergraduate GPA for the three academic years (1992-1995);
 2. Candidates with a major other than liberal studies will be held to the 50th percentile equivalent for the cumulative undergraduate GPA for that major or 2.6, whichever is higher, for the three academic years (1992-1995). For detailed information on the GPA requirement for majors and for graduates of other universities see an education advisor;
 3. Transfer candidates who complete 45 or more units as an undergraduate at California State University, San Bernardino will have their cumulative GPAs computed for admission with the same standards and on the basis of course work completed at this university only;
 4. 3.0 in professional education course work, with no course grade in this area lower than "B-."

- B. Written verification of registration for, or passage of the assessment of subject matter competence by the Liberal Studies Office.

No candidate may be recommended for the credential who has received a grade of lower than "C" (2.0) in any other course required for the credential, such as health science courses. In the case of a repeated class, only the highest grade the student has received will be considered for the purpose of this requirement.

6. One of the following:

- A. Completion of 4/5 of the requirements for the liberal studies major as offered on this campus and verified in writing by the liberal studies coordinator, or an approved diversified major on another campus,

OR

- B. Written verification of registration for or passing score on the PRAXIS series examination. (This option is required for those students who do not have a California-approved liberal studies waiver program.);

7. Submission of an application for a certificate of clearance or evidence of a credential or permit authorizing public school teaching in California;
8. Completion of or concurrent enrollment in the upper-division writing requirement at the university or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST (CBEST exam does not meet the graduate writing requirement for the Master of Arts degree.);
9. Written verification of registration for or passing score on the California Basic Educational Skills Test (CBEST);
10. Satisfactory completion of Elementary Education 321, Culture and Schooling;
11. Written statement of educational philosophy and goals completed in Elementary Education 321.

Once admission to the program has been granted, students may enroll in program course work.

Phase I

- EEIB 331. Growth and Development in Socio-Educational Contexts
- EEIB 332. Educational Psychology for a Diverse Society
- EEIB 333. Curriculum and Instruction for a Diverse Society

Phase II

- EEIB 441. Mathematics Curriculum and Methods in the Elementary School
- EEIB 443. Science Curriculum and Methods in the Elementary School
- EEIB 445. Reading/Language Arts Curriculum and Methods in the Elementary School

Admission to Student Teaching

One quarter in advance of the time students intend to enroll in the first segment of Phase III courses (Elementary Education 450A, 451 and 447), students must submit an application for student teaching. This application is due by Friday of the fifth week of the quarter prior to enrolling in student teaching. (No applications are accepted in the summer quarter.)

Admission to student teaching is based on the following criteria and conditions:

1. Interview by members of the Department of Elementary and Bilingual Education and other appropriate faculty;
 2. One of the following:
 - A. Completion of 4/5 of the requirement for the liberal studies major as offered at this campus and verified in writing by the liberal studies coordinator or an approved diversified major on another campus,
- OR**
- B. Verification that the applicant has passed the PRAXIS series examination.
 3. Verification that the applicant has passed the California Basic Educational Skills Test (CBEST);
 4. Satisfactory completion of Phase I and Phase II course work with a GPA of 3.0 ("B") and no course grade lower than "B-";
 5. Demonstration of subject matter competence as assessed by the Liberal Studies Office;
 6. Verification of a negative tuberculin examination within the last 24 months;
 7. Completion of the upper division writing requirement at the university, or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST.

In addition, the following criteria are used: professional aptitude, personality and character, oral and written language usage, and many-sided interests.

All course work taken at another college, or more than seven years ago, is subject to approval by the chair of the Elementary and Bilingual Education Department. **No more than 14 units of the credential program may be transferred. Student teaching is never transferable.**

Each applicant is reviewed in terms of all of the above criteria and conditions and in addition, each must have completed the prerequisite course work in education and be at least of senior standing. Student teaching for the credential is a full-time assignment for one quarter each of Elementary Education 450A (and 447 and 451) and Elementary Education 450B (and 542 and 480). **No concurrent course work should be taken beyond the required elementary education courses without permission of the department chair.**

Students who fail to successfully complete Elementary Education 450A or 450B, 447, 451, 452 or 480 will be denied continuation in the program. An appeal process is available. Consult the department office for details.

Program prerequisites (4 units):

Completion of the following course with a grade of "B-" or better:

EEIB 321. Culture and Schooling (4)

Credential Requirements (52 units)

Completion of the following course work with a grade point average of 3.0 ("B") with no course grade lower than "B-."

Phase I

1. EEIB 331. Growth and Development in Socio-Educational Contexts (4)
2. EEIB 332. Educational Psychology for a Diverse Society (4)
3. EEIB 333. Curriculum and Instruction for a Diverse Society (4)

Phase II

1. EEIB 441. Mathematics Curriculum and Methods in the Elementary School (4)
2. EEIB 443. Science Curriculum and Methods in the Elementary School (4)
3. EEIB 445. Reading/Language Arts Curriculum and Methods in the Elementary School (6)

Phase III

1. First quarter of student teaching (fall or winter)
 - EEIB 450A. Elementary Student Teaching (8)
 - EEIB 447. Social Studies/Humanities Curriculum and Methods in the Elementary School (4)
 - EEIB 451. Specially Designed Academic Instruction in the Elementary School (2)
2. Second quarter of student teaching (winter or spring)
 - EEIB 450B. Elementary Student Teaching (8)
 - EEIB 452. Second Language Acquisition in the Elementary School (2)
 - EEIB 480. Capstone Seminar (2)

Additional Requirements

Students must complete:

One of the following to meet the language requirement:

1. Two years of high school course work in a second language and a university course at the intermediate level (e.g. Spanish 150).
2. The equivalent of a year's study at the university level, usually 12 units.
3. Equivalent experiences that sensitize the candidate to the challenges of second language learning and acquisition.

Program Admissions Committee approval is required.

Students must also complete:

One of the following to fulfill the United States Constitution requirement (or successful completion of an examination administered through the Office of Extended Education):

- Hist 146. American Civilization (4)
- Hist 200. United States History to 1877 (4)
- Hist 540. Constitutional History of the United States (4)

PSci 203. American Government (4)

PSci 410. American Constitutional Law (4)

PSci 411. The Bill of Rights (4)

Upon completing the requirements for the baccalaureate degree, subject matter verification, subject matter competence, program completion, the U.S. Constitution requirement, and two quarters of full-time student teaching, candidates are eligible to apply for a preliminary credential.

Within five years candidates must complete a fifth year of study (45 quarter units of approved upper-division and/or graduate course work beyond the Bachelor of Arts). Continuing Education Units (CEU) are not applicable to the 45 quarter unit requirement. Students must also meet the health education, special education and computer literacy requirements (listed below) to obtain a professional clear credential.

Health education, special education and computer literacy requirements:

1. *To fulfill the health education requirement students must take A and B below:*

A. One of the following courses to fulfill the drug/alcohol, tobacco and nutrition requirement (*with a grade of "C" or better*):

HSci 332. Health Education in the Elementary School (4)

HSci 333. Health Education in the Secondary School (4)

HSci 364. Drug and Alcohol Use and Abuse (4)

HSci 435. Health and Human Development (4)

HSci 440. Family Health Issues for Educators (2)

B. Verification of current and valid CPR certification for infant/adolescent/adults.

2. *The following to fulfill the special education requirement (with a grade of "B-" or better):*

ESpe 530. Psychology and Education of Exceptional Individuals (4)

3. *The following are required to fulfill the computer literacy requirement (with a grade of "B-" or better):*

ETec 537. Introduction to Computer Technology in Education (2)

ETec 546. Computer Based Technology in Education (4)

Note: Pending state legislation may require curricular changes. Students must consult the current information sheet for this credential in the Department of Elementary and Bilingual Education.

MULTIPLE SUBJECT CREDENTIAL with a Crosscultural, Language and Academic Development Emphasis (CLAD) or Bilingual Crosscultural Language and Academic Development (BCLAD) (INTERN TRACK)

Requirements (62 units)

The multiple subject internship is an alternate program for those student teachers who have been placed in an employment setting. Specific admission requirements must be met beyond acceptance to the regular student teaching program and additional course work for intern teachers is required.

Admission to the university must precede admission to the credential program. In preparation for admission to the basic credential program, students enroll in Elementary Education 321. At the first class session, Program Admission Files (PAF) are presented and information on the application procedures is provided.

Those seeking the Bilingual Crosscultural Language and Academic Development Credential (BCLAD), must enroll in Humanities 335. The Origin and Contemporary Role of Latino Culture and Spanish 415. Comparative Linguistics: Spanish/English, prior to admission to the credential program. (See BCLAD credential information on page 143.)

Admission to the Program

One quarter in advance of the time students intend to enroll in Elementary Education 331, 332 and 333, students must submit Program Admission Files. The PAF is submitted to the Credential Program Admissions Office by Friday of the fifth week of the quarter prior to enrolling in any of the above courses. (No applications are accepted in the summer quarter.) Successful completion of Elementary Education 321, Humanities 335 and Spanish 415 and submission of PAF constitute admission to the credential program.

Students are particularly advised to complete the required California Basic Educational Skills Test (CBEST) and, if necessary, the PRAXIS series examination (credential must be completed within five years of taking the examination). Students must provide verification of passing scores on these examinations when they apply for admission to Phase III: Student Teaching.

Admission to the basic credential program is based on the following criteria and conditions:

1. Three written recommendations, at least two from faculty members in the student's major department;
2. Meet with and obtain signature of assigned Elementary Education advisor on advising form;
3. Verification of a negative tuberculin examination within the last 24 months;
4. Audiovisual clearance from Audiovisual Services;
5. Academic Achievement;
 - A. Applicants must possess the following minimum grade point averages:

1. Liberal studies majors will be held to the 50th percentile (2.89 at California State University, San Bernardino) for their cumulative undergraduate GPA for the three academic years (1992-1995);
 2. Candidates with a major other than liberal studies will be held to the 50th percentile equivalent for their cumulative undergraduate GPA for that major or 2.6, whichever is higher, for the three academic years (1992-1995). For detailed information on the GPA requirement for majors and for graduates of other universities see an education advisor;
 3. Transfer candidates who complete 45 or more units as an undergraduate at California State University, San Bernardino will have their cumulative GPAs computed for admission with the same standards and on the basis of course work completed at California State University, San Bernardino only;
 4. 3.0 in professional education course work, with no course grade in this area lower than "B-."
- B. Written verification of registration for, or passage of assessment of subject matter competence by the Liberal Studies Office.
No candidate may be recommended for the credential who has received a grade of less than "C" (2.0) in any other course required for the credential, such as health science courses. In the case of a repeated class, only the highest grade the student has received will be considered for the purpose of this requirement.
6. One of the following:
 - A. Completion of 4/5 of the requirements for the liberal studies major as offered on this campus and verified in writing by the liberal studies coordinator, or an approved diversified major on another campus,

OR

 - B. Written verification of registration for or a passing score on the PRAXIS series examination. (This option is required for those students who do not have a California approved Liberal Studies waiver program.)
 7. Submission of an application for a certificate of clearance or evidence of a credential or permit authorizing public school teaching in California;
 8. Completion of or concurrent enrollment in the upper-division writing requirement at the university or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST. (CBEST examination does not meet the graduate writing requirement for the Master of Arts degree.);
 9. Written verification of registration for or passing score on the California Basic Educational Skills Test (CBEST);
 10. Satisfactory completion of Elementary Education 321, Culture and Schooling;
 11. Written statement of educational philosophy and goals completed in Elementary Education 321.

12. BCLAD students must have completed Humanities 335 and Spanish 415.

Once admission to the credential program has been granted, students may enroll in program coursework.

Phase I

- EEIB 331. Growth and Development in Socio-Educational Contexts
- EEIB 332. Educational Psychology in a Diverse Society
- EEIB 333. Curriculum and Instruction for a Diverse Society

Phase II

- EEIB 441. Mathematics Curriculum and Methods in the Elementary School
- EEIB 443. Science Curriculum and Methods in the Elementary School

One of the following:

- EEIB 445. Reading/Language Arts Curriculum and Methods in the Elementary School (CLAD)
- EEIB 446. Reading/Language Arts (Primary Language) in the Elementary School (BCLAD)

Admission to Intern Teaching

Internships begin in the summer quarter and run for one academic year. This track utilizes summer course work. Summer tuition rates are higher than those for the regular year. This track is entirely voluntary.

Stage 1: Applicant

The applicant must be admitted to student teaching. One quarter in advance of the time students intend to enroll in the first segment of Phase III courses (Elementary Education 455A or 455B, 447 or 448, and 551, and 554, 555 or 556) students must submit an application for student teaching. This *student teaching* application is due by Friday of the fifth week prior to enrolling in student teaching. (No applications are accepted in the summer.)

Admission to student teaching is based on the following criteria and conditions:

1. Interview by members of the Department of Elementary and Bilingual Education and other appropriate faculty;
2. One of the following:
 - A. Completion of the requirements for the liberal studies major as offered at this campus and verified in writing by the liberal studies coordinator or an approved diversified major on another campus,
- OR**
- B. Verification that the applicant has passed the PRAXIS series examination;
3. Verification that the applicant has passed the California Basic Educational Skills Test (CBEST);
4. Satisfactory completion of the Phase I and Phase II course work with a GPA of 3.0 and no course grade lower than "B-";
5. Demonstration of subject matter competence as assessed by the liberal studies faculty;
6. Verification of a negative tuberculin examination within the last 24 months;
7. Completion of the upper division writing requirement at the university or the equivalent graduation requirement at

another accredited institution or a score of 41 or better on the written portion of CBEST.

8. Completion of the U.S. Constitution requirement.

In addition, the following criteria are used: professional aptitude, personality and character, oral and written language usage, and many-sided interests.

All course work taken at another college, or more than seven years ago, is subject to approval by the chair of the Elementary and Bilingual Education Department. **No more than 14 units of the credential program may be transferred. Student teaching is never transferable.**

Stage 2: Candidate

After qualifying for student teaching the applicant must meet two other requirements in order to qualify as an intern candidate:

- A. Elementary school teaching experience. Each applicant must have substantial classroom experience. (Information about this requirement is available in the C.A.S.E. Student Teaching Office.)
- B. Demonstration lesson on video tape with accompanying lesson plans.

Stage 3: Intern

The final step involves obtaining employment from one of the approved cooperating districts. Once the candidate gains employment, he or she is considered an intern.

Each applicant is reviewed in terms of all of the above criteria, must have completed the professional education course work and must have received the bachelor's degree by June of the beginning of the intern year.

The intern is employed full time in a teaching assignment in an approved cooperating school district while enrolled in courses at CSUSB. The study plan is as follows:

Summer

One of the following two courses:

- EEIB 447. Social Studies/Humanities Curriculum and Methods in the Elementary School (4) (CLAD)
- EEIB 448. Social Studies/Humanities (Primary Language) Curriculum and Methods in the Elementary School (4) (BCLAD)

For students who begin employment in the summer:

- EEIB 455C. Supervised Intern Teaching in Multiple Subject (8)
- EEIB 551. Internship Seminar I (2)

Fall

- EEIB 455A. Supervised Intern Teaching in Multiple Subject (8)
- EEIB 554. Internship Seminar II (4)

Winter

- EEIB 455B. Supervised Intern Teaching in Multiple Subject (8)
- EEIB 555. Internship Seminar III (4)

Spring

- EEIB 455C. Supervised Intern Teaching in Multiple Subject (8) (can only be taken once)
- EEIB 556. Internship Seminar IV (4)

The CSUSB Intern Program begins in the summer and continues for a full twelve months. Candidates must be prepared to begin course work in June and pay Summer

Session Extended Education fees. CSUSB internships are not available for mid-year employment situations.

Students apply for a one-year intern credential once they secure a position. Any student who fails one of the above courses must retake and pass the course within a two-year period.

Those students who wish to earn the BCLAD credential can do so by qualifying for admission to student teaching in the BCLAD program and taking Elementary Education 448 instead of Elementary Education 447 during the summer.

Additional Requirements

For BCLAD students only:

One of the following to meet the language requirement:

1. Two years of high school course work in a second language and a university course at the intermediate level (e.g. Spanish 150.)
2. The equivalent of a year's study at the university level, usually 12 units.
3. Equivalent experiences that sensitize the candidate to the challenges of second language learning and acquisition. Program Admissions Committee approval is required.

Students must also complete:

1. *One of the following to fulfill the United States Constitution requirement (or successful completion of an examination administered through the Office of Extended Education):*

Hist 146.	American Civilization (4)
Hist 200.	United States History to 1877 (4)
Hist 540.	Constitutional History of the United States (4)
PSci 203.	American Government (4)
PSci 410.	American Constitutional Law (4)
PSci 411.	The Bill of Rights (4)

Upon completing the requirements for the baccalaureate degree, subject matter verification, subject matter competence, program completion, the U.S. Constitution requirement, and three quarters of full-time intern teaching, candidates are eligible to apply for a preliminary credential.

Within five years candidates must complete a fifth year of study (45 quarter units of approved upper-division and/or graduate course work beyond the Bachelor of Arts). Continuing Education Units (CEU) are not applicable to the 45 quarter unit requirement. Students must also meet the health education, special education and computer literacy requirements (listed below) to obtain a professional clear credential.

Health education, special education and computer literacy requirements:

1. *To fulfill the health education requirement students must take A and B below:*
 - A. One of the following courses to fulfill the drug/alcohol, tobacco and nutrition requirement (*with a grade of "C" or better*):

HSci 332.	Health Education in the Elementary School (4)
HSci 333.	Health Education in the Secondary School (4)
HSci 364.	Drug and Alcohol Use and Abuse (4)

- | | |
|-----------|--|
| HSci 435. | Health and Human Development (4) |
| HSci 440. | Family Health Issues for Educators (2) |
- B. Verification of current and valid CPR certification for infant/adolescent/adults.

2. *One of the following to fulfill the special education requirement (with grade of "B-" or better):*

ESpe 523.	Mainstreaming Handicapped Individuals in the Elementary Classroom (2)
ESpe 530.	Psychology and Education of Exceptional Individuals (4)

3. *The following are required to fulfill the computer literacy requirement (with grade of "B-" or better):*

ETec 537.	Introduction to Computer Technology in Education (2)
ETec 546.	Computer Based Technology in Education (4)

Note: Pending state legislation may require curricular changes. Students must consult the current information sheet for this credential in the Department of Elementary and Bilingual Education.

MULTIPLE SUBJECT BILINGUAL, CROSSCULTURAL, LANGUAGE AND ACADEMIC DEVELOPMENT (BCLAD) CREDENTIAL

Requirements (52 units)

Admission to the university must precede admission to the credential program. In preparation for admission to the basic credential program, students must enroll in Elementary Education 321. At the first class session, Program Application Files (PAF) are presented and information is provided on the application procedures is provided.

Students also enroll in Humanities 335. The Origin and Contemporary Role of Latino Culture, and Spanish 415. Comparative Linguistics: Spanish/English, prior to admission.

Admission to the Program

One quarter in advance of the time students intend to enroll in Elementary Education 331, 332 and 333, students must submit Program Admission Files. The PAF is submitted to the Credential Program Admissions Office by Friday of the fifth week of the quarter prior to enrolling in any of the above listed courses. (No applications are accepted in the summer quarter). Successful completion of Elementary Education 321, Humanities 335, Spanish 415 and submission of PAF constitute admission to the credential program.

Students are particularly advised to complete the required California Basic Educational Skills Test (CBEST) and if necessary, the PRAXIS series examination (credential must be completed within five years of taking the examination.) Students must provide verification of passing scores on these exams when they apply for admission to Phase III: Student Teaching.

Admission to the basic credential program is based on the following criteria and conditions:

1. Three written recommendations, at least two from faculty members in the student's major department;
2. Meet with and obtain signature of assigned Elementary Education advisor on advising form;
3. Verification of a negative tuberculin examination within the last 24 months;
4. Audiovisual clearance from Audiovisual Services;
5. Academic Achievement;
 - A. Applicants must possess the following minimum grade point averages:
 1. Liberal studies majors will be held to the 50th percentile (2.89 for graduates of California State University, San Bernardino) for cumulative undergraduate GPA for the three academic years (1992-1995);
 2. Candidates with a major other than liberal studies will be held to the 50th percentile equivalent for the cumulative undergraduate GPA for that major or 2.6, whichever is higher, for the three academic years (1992-1995). For detailed information on the GPA requirements for majors and for graduates of other universities see an education advisor;
 3. Transfer candidates who complete 45 or more units as an undergraduate at California State University, San Bernardino will have cumulative GPAs computed for admission with the same standards and on the basis of course work completed at California State University, San Bernardino only;
 4. 3.0 in professional education course work, with no course grade in this area lower than "B-."
 - B. Written verification of registration for, or passage of the assessment of subject matter competence by the Liberal Studies Office.

No candidate may be recommended for the credential who has received a grade lower than "C" (2.0) in any other course for the credential, such as health science courses. In the case of a repeated class, only the highest grade the student has received will be considered for the purpose of this requirement.

6. One of the following:
 - A. Completion of 4/5 of the requirements for the liberal studies major as offered on this campus and verified in writing by the liberal studies coordinator, or an approved diversified major on another campus,
 - OR**
 - B. Written verification of registration for or passing score on the PRAXIS series examination. (This option is required for those students who do not have a California approved liberal studies waiver program.)
7. Submission of an application for a certificate of clearance or evidence of a credential or permit authorizing public school teaching in California;
8. Completion of or concurrent enrollment in the upper-division writing requirement at this university or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST (CBEST exam does not meet the

graduate writing requirement for the Master of Arts degree.);

9. Written verification of registration for or passing score on the California Basic Educational Skills Test (CBEST);
 10. Satisfactory completion of the following:

EEIB 321.	Culture and Schooling (<i>with a grade of "B-" or better</i>)
Hum 335.	The Origin and Contemporary Role of Latino Culture (<i>with a grade of "B" or better</i>)
Span 415.	Comparative Linguistics: Spanish/English (<i>with a grade of "B" or better</i>)
 11. Written statement of educational philosophy and goals completed in Elementary Education 321.
- Once admission to the program has been granted, students may enroll in program coursework.

Phase I

- | | |
|-----------|--|
| EEIB 331. | Growth and Development in Socio-Educational Contexts |
| EEIB 332. | Educational Psychology for a Diverse Society |
| EEIB 333. | Curriculum and Instruction for a Diverse Society |

Phase II

- | | |
|-----------|--|
| EEIB 441. | Mathematics Curriculum and Methods in the Elementary School |
| EEIB 443. | Science Curriculum and Methods in the Elementary School |
| EEIB 446. | Reading/Language Arts (Primary Language) Curriculum and Methods in the Elementary School |

Admission to Student Teaching

One quarter in advance of the time students intend to enroll in the first phase of Phase III courses (EEIB 448, 450A, and 451), students must submit an application for student teaching. This application is due by Friday of the fifth week of the quarter prior to enrolling in student teaching. (No applications are accepted in the summer quarter.)

Admission to student teaching is based on the following criteria and conditions:

1. Interview by members of the Department of Elementary and Bilingual Education and other appropriate faculty;
2. One of the following:
 - A. Completion of 4/5 of the requirement for the liberal studies major as offered at this campus and verified in writing by the liberal studies coordinator or an approved diversified major on another campus,
 - OR**
 - B. Verification that the applicant passed the PRAXIS series examination.
3. Verification that the applicant has passed the California Basic Educational Skills Test (CBEST);
4. Satisfactory completion of Phase I and II coursework with GPA of 3.0 ("B") and no course grade lower than a "B-";
5. Demonstration of subject matter competence as assessed by the Liberal Studies Office;
6. Verification of a negative tuberculin examination within the last 24 months;

7. Completion of the upper division writing requirement at this university or the equivalent graduation requirement at another accredited institution or a score of 41 or better on the written portion of the CBEST;
8. Satisfactory completion of Spanish 415. Comparative Linguistics: Spanish/English, (*with a grade of "B" or better*);
9. Satisfactory completion of Humanities 335. The Origin and Contemporary Role of Latino Culture, (*with a grade of "B" or better.*)

In addition the following criteria are used: professional aptitude, personality and character, oral and written language usage, and many-sided interests.

All course work taken at another college, or more than seven years ago, is subject to approval by the chair of the Elementary and Bilingual Education Department. **No more than 14 units of the credential program may be transferred. Student teaching is never transferable.**

Each applicant is reviewed in terms of all of the above criteria and conditions, and in addition, each must have completed the prerequisite course work in education and be at least of senior standing. Student teaching for the credential is a full-time assignment for one quarter each of Elementary Education 450A (and 448 and 451) and 450B (and 542 and 480). **No concurrent course work should be taken beyond the concurrent Elementary Education courses without permission of the Department Chair.**

Students who fail to successfully complete Elementary Education 448, 450A, 450B, 451, 452 or 480 will be denied continuation in the program. An appeal process is available. Consult the department office for details.

Program prerequisites (12 units)

1. EEIB 321. Culture and Schooling (*with a grade of "B-" or better*)
2. Hum 335. The Origin and Contemporary Role of Latino Culture (*with a grade of "B" or better*)
3. Span 415. Comparative Linguistics: Spanish/English (*with a grade of "B" or better*)

Credential Requirements (52 units)

Completion of the following course work with a grade point average of 3.0 with no course grade lower than "B-."

Phase I

1. EEIB 331. Growth and Development in Socio-Educational Contexts (4)
2. EEIB 332. Educational Psychology for a Diverse Society (4)
3. EEIB 333. Curriculum and Instruction for a Diverse Society (4)

Phase II

1. EEIB 441. Mathematics Curriculum and Methods in the Elementary School (4)
2. EEIB 443. Science Curriculum and Methods in the Elementary School (4)
3. EEIB 446. Reading/Language Arts (Primary Language) Curriculum and Methods in the Elementary School (6)

Phase III

1. First quarter student teaching (fall or winter)

- | | |
|------------|--|
| EEIB 450A. | Elementary Student Teaching (8) |
| EEIB 451. | Specially Designed Academic Instruction in the Elementary School (2) |
| EEIB 448. | Social Studies/Humanities (Primary Language) Curriculum and Methods in the Elementary School (4) |
| 2. | Second quarter student teaching (winter or spring) |
| EEIB 450B. | Elementary Student Teaching (8) |
| EEIB 452. | Second Language Acquisition in the Elementary School (2) |
| EEIB 480. | Capstone Seminar (2) |

Additional Requirements

Students must also complete:

1. *One of the following to fulfill the United States Constitution requirement (or successful completion of an examination administered through the Office of Extended Education):*
 - Hist 146. American Civilization (4)
 - Hist 200. United States History to 1877 (4)
 - Hist 540. Constitutional History of the United States (4)
 - PSci 203. American Government (4)
 - PSci 410. American Constitutional Law (4)
 - PSci 411. The Bill of Rights (4)

Upon completing a baccalaureate degree, subject matter competency, CBEST, the CSUSB teacher preparation program, and the U.S. Constitution requirement, candidates are eligible to apply for a preliminary credential.

Within five years candidates must complete a fifth year of study (45 quarter hours of approved upper-division and/or graduate course work beyond the Bachelor of Arts) Continuing Education Units (CEU) are not applicable to the 45 quarter unit requirement. Students must also meet the health education, special education and computer literacy requirements (listed below) to obtain a professional clear credential.

Health education, special education and computer literacy requirements:

1. *To fulfill the health education requirement students must take A and B below:*
 - A. One of the following courses to fulfill the drug/alcohol, tobacco and nutrition requirement (*with a grade of "C" or better*):
 - HSci 332. Health Education in the Elementary School (4)
 - HSci 333. Health Education in the Secondary School (4)
 - HSci 364. Drug and Alcohol Use and Abuse (4)
 - HSci 435. Health and Human Development (4)
 - HSci 440. Family Health Issues for Educators (2)
 - B. Verification of current and valid CPR certification for infant/adolescent/adults.
2. *The following to fulfill the special education requirement (with a grade of "B-" or better):*
 - ESpe 530. Psychology and Education of Exceptional Individuals (4)
3. *The following are required to fulfill the computer literacy requirement (with a grade of "B-" or better):*

- ETec 537. Introduction to Computer Technology in Education (2)
- ETec 546. Computer Based Technology in Education (4)

Note: Pending state legislation may require curricular changes. Students must consult the current information sheet for this credential in the School of Education.

SINGLE SUBJECT TEACHING CREDENTIAL (Crosscultural, Language and Academic Development - CLAD Track)

Requirements (44 units)

Admission to the university must precede admission to the credential program.

Students begin the program with Secondary Education 321. Culture and Schooling. Students may enroll concurrently in Secondary Education 332. Educational Psychology for a Diverse Society; and Secondary Education 333. Curriculum and Instruction for a Diverse Society, without being admitted to the program.

Admission to the Program

One quarter in advance of the time students intend to enroll concurrently in Secondary Education 332, 440 and 445, students must submit an application for entry into the basic credential program. This application is due by Friday of the fifth week of the quarter prior to enrolling in any of these courses. (No applications are accepted in the summer quarter.) Students are particularly advised to complete the required California Basic Educational Skills Test (CBEST) and (if necessary) the appropriate NTE or PRAXIS series examination as early as possible in order to be able to provide verification of passing scores with their application for admission to the program. (Credential must be completed within five years of taking the examination.)

Admission to the basic credential is based on the following criteria:

1. Three written recommendations, at least two from faculty members in the student's major department;
2. Meet with and obtain signature of a Secondary Education faculty member on an advising form;
3. Verification of a negative tuberculin examination within the last 24 months;
4. Audiovisual clearance from Audiovisual Services;
5. Academic Achievement;
 - A. Applicants must possess the following minimum grade point averages:
 1. Single Subject majors will be held to the 50th percentile equivalent for their cumulative undergraduate GPA for that major. A list of the required GPAs is available from the C.A.S.E. Student Teaching Office and the Department of Secondary and Vocational Education;
 2. Candidates with a major other than the single subject field in which they plan to student teach

will be held to the 50th percentile equivalent for their cumulative undergraduate GPA for that major or 2.6, whichever is higher, for the three academic years (1992-1995);

3. Transfer candidates who complete 45 or more units as an undergraduate at California State University, San Bernardino will have their cumulative GPAs computed for admission with the same standards and on the basis of course work completed at California State University, San Bernardino only;
4. A grade point average of 3.0 ("B") in professional education course work, with no course grade in this area lower than "B-."
- B. Written verification of registration for, or passage of the assessment of subject matter competence in the appropriate single subject major department.

No candidate may be recommended for the credential who has received a grade of less than "C" (2.0) in any other course required for the credential, such as health science courses. In the case of a repeated class, only the highest grade the student has received will be considered for the purpose of this requirement.

6. Compete A or B below:
 - A. Completion of 4/5 of the requirements for one of the following degree programs at this university:

Single Subject Credential

Art
English
Foreign Language

Government
Health Science
History
Mathematics

Music
Physical Education
Science

Social Science

Degree Major

B.A. Art (Plan I)
B.A. English
B.A. Spanish or
B.A. French

B.A. Political Science
B.S. Health Sciences
B.A. History (Track A)
B.A. Mathematics
B.S. Mathematics

B.A. Music (Option I)
B.S. Physical Education
B.A. in the Sciences
B.S. in the Sciences

B.A. Social Sciences

For further information on other majors, supplementary authorizations, examinations and waivers, students should contact the Department of Secondary and Vocational Education and/or the appropriate major department.

- B. Written verification of registration for or passing score on the National Teacher Examination (Specialty Examination) or PRAXIS series examination in the Single Subject.
7. Submission of an application for a certificate of clearance or evidence of a credential or permit authorizing public school teaching in California;
8. Completion of or concurrent enrollment in the upper-division writing requirement at the university or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written

portion of the CBEST. (CBEST exam does not meet the graduate writing requirement for the Master of Arts degree.);

9. Written verification of registration for or passing score on the CBEST;
10. Satisfactory completion of the following prerequisite courses:

ESec 321.	Culture and Schooling
ESec 332.	Educational Psychology for a Diverse Society
ESec 333.	Curriculum and Instruction for a Diverse Society
11. Written statement of educational philosophy and goals;
12. Successful completion of six (6) semester or nine (9) quarter units of college coursework in a second language with a grade of "C" or better, or an equivalent experience, such as participation in the Peace Corps or residency in a Spanish speaking country.

Admission to Student Teaching

Once admission to the program has been granted and prerequisite courses successfully completed, students may enroll in:

- A. ESec 440. Secondary School Curriculum and Instruction I
- B. ESec 443. Adolescent Development and Educational Contexts
- C. ESec 445. Teaching Reading and Writing in Secondary School Subjects

(These courses have prerequisites.)

One quarter in advance of the time students intend to enroll in Secondary Education 441 and 421A (student teaching), students must submit an application for student teaching. This application is due by Friday of the fifth week of the quarter prior to enrolling in student teaching. (No applications are accepted in the summer quarter.)

Admission to student teaching is based on the following criteria:

1. Interview by members of the Department of Secondary and Vocational Education;
2. One of the following:
 - A. Completion of an approved degree program for Single Subject Credential.

OR

 - B. Completion of the National Teacher Examination (Specialty Examination) or PRAXIS series examination in the Single Subject area;
3. Submission of evidence that the applicant has passed the CBEST;
4. Satisfactory completion of the following:

ESec 440.	Secondary School Curriculum and Instruction I
ESec 443.	Adolescent Development and Educational Contexts
ESec 445.	Teaching Reading and Writing in Secondary School Subjects

with a GPA of 3.0 ("B") and no grade lower than "B-"
(These courses have prerequisites.);

5. Demonstration of subject matter competence as assessed by the faculty of the appropriate single subject major department;

6. Verification of a negative tuberculin examination within the last 24 months;
7. Completion of the upper-division writing requirement at the university, or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST. (CBEST exam does not meet the graduate writing requirement for the Master of Arts degree.)

In addition, the following criteria are used: professional aptitude, personality and character, oral and written language usage, and interest in multicultural education.

All course work taken at another institution, or more than seven years ago, is subject to approval by the Chair of the Department of Secondary and Vocational Education. **No more than 14 units of the credential program may be transferred. Student teaching is never transferable.**

Each applicant is reviewed in terms of all of the above criteria and in addition, each must have completed the prerequisite course work in education and be at least of senior standing. Student teaching for the credential is a full-time assignment for one quarter in Secondary Education 421A and a full-time assignment for one quarter in Secondary Education 421B. **No concurrent course work should be taken beyond the required Secondary Education 441 and 480 without permission from the Department Chair.**

Students who fail to successfully complete Secondary Education 421A, 480A or 441 will be denied continuation in the program. An appeal process is available. Consult the department for details.

Program Prerequisites (12 units)

Completion of the following course work with a grade point average of 3.0 ("B") with no course grade lower than "B-."

1. ESec 321. Culture and Schooling (4)
2. ESec 332. Educational Psychology for a Diverse Society (4)
3. ESec 333. Curriculum and Instruction for a Diverse Society (4)

Credential Requirements (44 units)

Completion of the following course work with a grade point average of 3.0 ("B") with no course grade lower than "B-."

1. ESec 440. Secondary School Curriculum and Instruction I (4)
2. ESec 443. Adolescent Development and Educational Contexts (4)
3. ESec 445. Teaching Reading and Writing in Secondary School Subjects (4)
4. *Student Teaching (First Quarter) Fall or Winter*

ESec 421A.	Secondary Student Teaching (8)
ESec 480A.	Student Teaching Seminar (2)
ESec 441.	Secondary School Curriculum and Instruction II (4) (offered winter quarter only)

Note: In lieu of Secondary Education 441 students may take a course in the candidate's discipline numbered 499 (Methods and Materials for Teaching in a Single Subject Field).

5. *Student Teaching (Second Quarter) Winter or Spring:*
 - ESec 421B. Secondary Student Teaching (8)
 - ESec 441. Secondary School Curriculum and Instruction II (4) (offered winter quarter only)
 - ESec 480B. Student Teaching Seminar (2)
 - ESec 510. Second Language Acquisition in Secondary Schools (4) (offered fall and spring quarters only)

Additional Requirements

Students must also complete:

One of the following to fulfill the United States Constitution requirement (or successful completion of an examination administered through the Office of Extended Education):

- Hist 146. American Civilization (4)
- Hist 200. United States History to 1877 (4)
- Hist 540. Constitutional History of the United States (4)
- PSci 203. American Government (4)
- PSci 410. American Constitutional Law (4)
- PSci 411. The Bill of Rights (4)

Upon completing the requirements for the baccalaureate degree, subject matter competence, program completion, the U.S. Constitution requirement, and two quarters of student teaching, candidates will be awarded a certificate of completion from California State University, San Bernardino and may apply for a preliminary credential.

Within five years candidates must complete a fifth year of study (45 quarter units of approved upper-division and/or graduate course work beyond the Bachelor of Arts). Continuing Education Units (CEU) are not applicable to the 45 quarter unit requirement. Students must also meet the health education, special education and computer literacy requirements (listed below) to obtain a professional clear credential.

Health education, special education and computer literacy requirements:

1. *To fulfill the health education requirement students must take A and B below:*
 - A. One of the following courses to fulfill the drug/alcohol, tobacco and nutrition requirement (*with a grade of "C" or better*):
 - HSci 332. Health Education in the Elementary School (4)
 - HSci 333. Health Education in the Secondary School (4)
 - HSci 364. Drug and Alcohol Use and Abuse (4)
 - HSci 435. Health and Human Development (4)
 - HSci 440. Family Health Issues for Educators (2)
 - B. Verification of current and valid CPR certification for infant/adolescent/adults.
2. *One of the following to fulfill the special education requirement (required for any single subject student who has not completed Secondary Education 332, 421A, 421B, 440 and 445 at this university since the beginning of winter quarter of 1979):*
 - ESec 523. The Exceptional Student in Secondary Education (2)
 - ESpe 530. Psychology and Education of Exceptional Individuals (4)

3. *The following are required to fulfill the computer literacy requirement:*

- ETec 537. Introduction to Computer Technology in Education (2)
- ETec 546. Computer Based Technology in Education (4)

Note: Pending state legislation may require curricular changes. Students must consult the current information sheet for this credential in the Department of Secondary and Vocational Education.

SINGLE SUBJECT TEACHING CREDENTIAL

Requirements (40 units)

Admission to the university must precede admission to the credential program.

Students may enroll in Secondary Education 321. Culture and Schooling and Secondary Education 332. Educational Psychology for a Diverse Society.

Admission to the Program

One quarter in advance of the time students intend to enroll in Secondary Education 332, 440 and 445, students must submit an application for entry into the basic credential program. This application is due by Friday of the sixth week of the quarter prior to enrolling in any of these courses. (No applications are accepted in the summer quarter.) Students are particularly advised to complete the required California Basic Educational Skills Test (CBEST) and (if necessary) the appropriate NTE or PRAXIS series examination as early as possible in order to be able to provide verification of passing scores with their application for admission to the program. (Credential must be completed within five years of completing the examination.)

Admission to the basic credential is based on the following criteria:

1. Three written recommendations, at least two from faculty members in the student's major department;
2. Meet with and obtain signature of a Secondary Education faculty member on an advising form;
3. Verification of a negative tuberculin examination within the last 24 months;
4. Audiovisual clearance from Audiovisual Services;
5. Academic Achievement.
 - A. Applicants must possess the following minimum grade point averages:
 1. Single Subject majors will be held to the 50th percentile equivalent for their cumulative undergraduate GPA for that major. A list of the required GPAs is available from the C.A.S.E. Student Teaching Office, the Department of Secondary and Vocational Education, and any single subject advisor in education;
 2. Candidates with a major other than the single subject field in which they plan to student teach will be held to the 50th percentile equivalent for their cumulative undergraduate GPA for that major or 2.6, whichever is higher, for the three academic years (1992-1995);

3. Transfer candidates who complete 45 or more units as an undergraduate at California State University, San Bernardino will have their cumulative GPAs computed for admission with the same standards and on the basis of course work completed at California State University, San Bernardino only;

4. A grade point average of 3.0 ("B") in professional education course work, with no course grade in this area lower than "B-."

- B. Written verification of registration for, or passage of the assessment of subject matter competence in the appropriate single subject major department.

No candidate may be recommended for the credential who has received a grade of less than "C" (2.0) in any other course required for the credential, such as health science courses. In the case of a repeated class, only the highest grade the student has received will be considered for the purpose of this requirement.

6. Complete A or B below:

- A. Completion of 4/5 of the requirements for one of the following degree programs at this university:

Single Subject

Credential

Art

English

Foreign Language

Government

Health Science

History

Mathematics

Music

Physical Education

Science

Social Science

Degree Major

B.A. Art (Plan I)

B.A. English

B.A. Spanish or

B.A. French

B.A. Political Science

B.S. Health Sciences

B.A. History (Track A)

B.A. Mathematics

B.S. Mathematics

B.A. Music (Option I)

B.S. Physical Education

B.A. in the Sciences

B.S. in the Sciences

B.A. Social Sciences

For further information on other majors, supplementary authorizations, examinations and waivers, students should contact the Department of Secondary and Vocational Education and/or the appropriate major department.

- B. Written verification of registration for or passing score on the National Teacher Examination (Specialty Examination) or PRAXIS series examination in the Single Subject.

7. Submission of an application for a certificate of clearance or evidence of a credential or permit authorizing public school teaching in California;
8. Completion of or concurrent enrollment in the upper-division writing requirement at the university or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST (CBEST exam does not meet the graduate writing requirement for the Master of Arts degree.);
9. Written verification of registration for or passing score on the CBEST;

10. Satisfactory completion of the following prerequisite courses:

ESec 321. Culture and Schooling

ESec 332. Educational Psychology for a Diverse Society

11. Written statement of educational philosophy and goals.

Admission to Student Teaching

Once prerequisite courses have been taken, and admission to the program has been granted, students may enroll in:

A. ESec 440. Secondary School Curriculum and Instruction I

B. ESec 443. Adolescent Development and Educational Contexts

C. ESec 445. Teaching Reading and Writing in Secondary School Subjects

(These courses have prerequisites.)

One quarter in advance of the time students intend to enroll in Secondary Education 441 and 421A (student teaching), students must submit an application for student teaching. This application is due by Thursday of the fifth week of the quarter prior to enrolling in student teaching. (No applications are accepted in the summer quarter.)

Admission to student teaching is based on the following criteria:

1. Interview by members of the Department of Secondary and Vocational Education;

2. One of the following:

A. Completion of an approved degree program for Single Subject Credential.

OR

B. Completion of the National Teacher Examination (Specialty Examination) or PRAXIS series examination in the Single Subject area;

3. Satisfactory completion of the CBEST;

4. Satisfactory completion of the following:

ESec 440. Secondary School Curriculum and Instruction I

ESec 443. Adolescent Development and Educational Contexts

ESec 445. Teaching Reading and Writing in Secondary School Subjects

with a GPA of 3.0 ("B") and no grade lower than "B-"
(These courses have prerequisites.);

5. Demonstration of subject matter competence as assessed by the faculty of the appropriate single subject major department;

6. Verification of a negative tuberculin examination within the last 24 months;

7. Completion of the upper-division writing requirement at the university, or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST. (CBEST exam does not meet the graduate writing requirement for the Master of Arts degree.)

In addition, the following criteria are used: professional aptitude, personality and character, oral and written language usage, and many-sided interests.

All course work taken at another institution, or more than seven years ago, is subject to approval by the Chair of

the Department of Secondary and Vocational Education. **No more than 14 units of the credential program may be transferred. Student teaching is never transferable.**

Each applicant is reviewed in terms of all of the above criteria and in addition, each must have completed the prerequisite course work in education and be at least of senior standing. Student teaching for the credential is a full-time assignment for one quarter in Secondary Education 421A and a full-time assignment for one quarter in Secondary Education 421B. **No concurrent course work should be taken beyond the required Secondary Education 441 and 480 without permission from the Department Chair.**

Students who fail to successfully complete Secondary Education 421A, 480A or 441 will be denied continuation in the program. An appeal process is available. Consult the department for details.

Program Prerequisites (8 units)

Completion of the following course work with a grade point average of 3.0 ("B") with no course grade lower than "B-:"

1. ESec 321. Culture and Schooling (4)
2. ESec 332. Educational Psychology for a Diverse Society (4)

Credential Requirements (40 units)

Completion of the following course work with a grade point average of 3.0 ("B") with no course grade lower than "B-:"

1. ESec 440. Secondary School Curriculum and Instruction I (4)
2. ESec 443. Adolescent Development and Educational Contexts (4)
3. ESec 445. Teaching Reading and Writing in Secondary School Subjects (4)
4. *Student Teaching (First Quarter) Fall or Winter*
 ESec 421A. Secondary Student Teaching (8)
 ESec 480A. Student Teaching Seminar (2)
 ESec 441. Secondary School Curriculum and Instruction II (4) (offered winter quarter only)

Note: In lieu of Secondary Education 441 students may take a course in the candidate's discipline numbered 499 (Methods and Materials for Teaching in a Single Subject Field).

5. *Student Teaching (Second Quarter) Winter or Spring:*
 ESec 421B. Secondary Student Teaching (8)
 ESec 441. Secondary School Curriculum and Instruction II (4) (offered winter quarter only)
 ESec 480B. Student Teaching Seminar (2)

Note: In lieu of Secondary Education 441 students may take a course in the candidate's discipline numbered 499 (Methods and Materials for Teaching in a Single Subject Field).

Additional Requirements

Students must also complete:

One of the following to fulfill the United States Constitution requirement (or successful completion of an examination administered through the Office of Extended Education):

- | | |
|-----------|---|
| Hist 146. | American Civilization (4) |
| Hist 200. | United States History to 1877 (4) |
| Hist 540. | Constitutional History of the United States (4) |
| PSci 203. | American Government (4) |
| PSci 410. | American Constitutional Law (4) |
| PSci 411. | The Bill of Rights (4) |

Upon completing the requirements for the baccalaureate degree, subject matter competence, program completion, the U.S. Constitution requirement, and two quarters of student teaching, candidates are eligible to apply for a preliminary credential.

Within five years candidates must complete a fifth year of study (45 quarter units of approved upper-division and/or graduate course work beyond the Bachelor of Arts). Continuing Education Units (CEU) are not applicable to the 45 unit requirement. Students must also meet the health education, special education and computer literacy requirements (listed below) to obtain a professional clear credential.

Health education, special education and computer literacy requirements:

1. *To fulfill the health education requirement students must take A and B below:*
 - A. One of the following courses to fulfill the drug/alcohol, tobacco and nutrition requirement (*with a grade of "C" or better*):
 HSci 332. Health Education in the Elementary School (4)
 HSci 333. Health Education in the Secondary School (4)
 HSci 364. Drug and Alcohol Use and Abuse (4)
 HSci 435. Health and Human Development (4)
 HSci 440. Family Health Issues for Educators (2)
 - B. Verification of current and valid CPR certification for infant/adolescent/adults.
2. *One of the following to fulfill the special education requirement (required for any single subject student who has not completed Education 332, Secondary Education 421A, 421B, 440 and 445 at this university since the beginning of winter quarter of 1979):*
 ESec 523. The Exceptional Student in Secondary Education (2)
 ESpe 530. Psychology and Education of Exceptional Individuals (4)
3. *The following are required to fulfill the computer literacy requirement:*
 ETec 537. Introduction to Computer Technology in Education (2)
 ETec 546. Computer Based Technology in Education (4)

Note: Pending state legislation may require curricular changes. Students must consult the current information sheet for this credential in the Department of Secondary and Vocational Education.

SINGLE SUBJECT CREDENTIAL (INTERN TRACK)

Requirements (64 units)

The single subject internship is an alternate program for those student teachers who have been placed in an employed setting. Admission and program requirements differ from those of the regular credential program. Consult faculty advisor for changes in the intern program.

Admission to the Program

Admission to the university must precede admission to the credential program.

Students may enroll in Education 200. Introduction to Careers in Education, Secondary Education 443. Adolescent Development and Educational Contexts, or Psychology 328. Psychology of Adolescent Behavior, without being admitted to the program.

PLEASE NOTE: The admission point for entry to basic credential programs has been changed as required by Executive Order #547 from the CSU Chancellor's Office. Students planning to begin the professional education program after the fall term of 1990 must have completed items No. 1 through 9 below prior to enrolling in Education 332, Secondary Education 421, 440, 441, 445 or 480. Students are particularly advised to complete the California Basic Educational Skills Test (CBEST) and (if necessary) the NTE and PRAXIS series examination as early as possible in order to be able to provide verification of passing scores with their application for admission to the program. (Credential must be completed within five years of taking the examination.)

Admission to the program is based on the following criteria:

1. Three written recommendations, at least two from faculty members in the student's major department;
2. Interview by a special panel of university faculty, secondary teachers, and school and district administrators;
3. Verification of a negative tuberculin examination within the last 24 months;
4. Audiovisual clearance from Audiovisual Services;
5. Academic Achievement.
 - A. Applicants must possess the following minimum grade point averages:
 1. Single subject majors will be held to the 50th percentile equivalent for California State University, San Bernardino majors for their cumulative undergraduate GPA. A list of the required GPAs is available from the Credentials Office, the department chair in education, the department chair in that major, and any single subject advisor in education.
 2. Candidates with a major other than the single subject field in which they plan to student teach will be held to the 50th percentile equivalent for that major at California State University, San Bernardino for their cumulative undergraduate GPA or 2.6, whichever is higher, for the three

academic years (1992-1995).

3. Transfer candidates who complete 45 or more units as an undergraduate at California State University, San Bernardino will have their cumulative GPAs computed for admission with the same standards and on the basis of course work completed at California State University, San Bernardino only.
 4. 3.0 ("B") GPA in professional education course work with no course grade in this area lower than "B-."
- B. Demonstrate subject matter competence as assessed by the faculty of the appropriate single subject teaching major department.
- No candidate may be recommended for the credential who has received a grade of less than "C" (2.0) in any other course required for the credential, such as health science courses. In the case of a repeated class, only the highest grade the student has received will be considered for the purpose of this requirement.
6. Complete A or B below:
 - A. Completion of one of the following degree programs at this university:

<u>Single Subject Credential</u>	<u>Degree Major</u>
Art	B.A. Art (Plan I)
English	B.A. English
Foreign Language	B.A. Spanish or B.A. French
Government	B.A. Political Science
Health Science	B.S. Health Science
History	B.A. History (Track A)
Life Science	B.A. Biology B.S. Biology
Mathematics	B.A. Mathematics B.S. Mathematics
Music	B.A. Music (Option II)
Physical Education	B.S. Physical Education
Physical Science	B.A. Chemistry B.S. Chemistry
	B.A. Physics B.S. Physics
Social Science	B.A. Social Sciences

For further information on other majors, supplementary authorizations, examinations and waivers, students should contact The Department of Secondary and Vocational Education and/or the appropriate major department.
 - B. Completion of the National Teacher Examination (Specialty Examination) and PRAXIS series examination in the Single Subject.
 7. Submission of an application for a certificate of clearance or evidence of a credential or permit authorizing public school teaching in California;
 8. Completion of the upper-division writing requirement at the university or the equivalent graduation requirement at another accredited institution, or a score of 41 or better on the written portion of the CBEST (CBEST examination does not meet the graduate writing requirement for the Master of Arts degree.);

9. Satisfactory completion of the California Basic Educational Skills Test (CBEST);
10. Satisfactory completion of the following prerequisite courses:
 - ESec 332. Educational Psychology for a Diverse Society
 - ESec 440. Secondary School Curriculum and Instruction I
 - ESec 445. Teaching Reading and Writing in Secondary School Subjects
 with a GPA of 3.0 and no course grade lower than "B-" (These courses have prerequisites.)

11. At least two years of experience in a school setting as a teacher, aide or counselor. Daily substituting does not meet this requirement.

12. Completion of the U.S. Constitution requirement.

In addition, the following criteria are used: professional aptitude, personality and character, oral and written language usage, and many-sided interests.

All course work taken at another college, or more than seven years ago, is subject to approval by the Chair of the Department of Secondary and Vocational Education. **No more than 14 units of the credential program may be transferred. Student teaching is never transferable.**

Applications for intern candidacy must be submitted in the winter quarter of the calendar year preceding commencement of an internship. (Internships begin in the summer quarter and run for one academic year. This track utilizes summer course work. Summer tuition rates are higher than those for the regular year. This track is entirely voluntary.) It is the responsibility of the intern candidate to obtain employment. The university provides the names of school districts that have intern contracts. Applicants who are accepted to intern candidacy, but who do not find a position, are qualified for regular student teaching.

Program prerequisites (6 units):

1. Educ 200. Introduction to Careers in Education (2)
 2. ESec 443. Adolescent Development and Educational Contexts (4)
- or
- Psyc 328. Psychology of Adolescent Development (4)

Credential Requirements (58 units)

Completion of the following course work with a grade point average of 3.0 ("B") with no course grade lower than "B-":

1. ESec 332. Educational Psychology for a Diverse Society (4)
2. ESec 440. Secondary School Curriculum and Instruction I (4)
3. ESec 445. Teaching Reading and Writing in Secondary School Subjects (4)
4. *Internship:*
ESec 554. Internship Seminar I (4)
5. *Internship:*
ESec 422A. Intern Teaching in Single Subject (10)
ESec 555. Internship Seminar II (2)

6. *Internship:*
ESec 422B. Intern Teaching in Single Subject (10)
ESec 441. Secondary School Curriculum and Instruction II (4)

Note: In lieu of Secondary Education 441 students may take a course in the candidate's discipline numbered 499 (Methods and Materials for Teaching in a Single Subject Field).

7. *Internship:*
ESec 422C. Intern Teaching in Single Subject (10)
Educ 556. Internship Seminar III (2)

Additional Requirements

Students must also complete:

One of the following to fulfill the United States Constitution requirement (or successful completion of an examination administered through the University Counseling and Testing Center):

- Hist 146. American Civilization (4)
- Hist 200. United States History to 1877 (4)
- Hist 540. Constitutional History of the United States (4)
- PSci 203. American Government (4)
- PSci 410. American Constitutional Law (4)
- PSci 411. The Bill of Rights (4)

Upon completing the requirements for the baccalaureate degree, subject matter competence, program completion, the U.S. Constitution requirement, and three quarters of student teaching, candidates may apply for a preliminary credential. Within five years candidates must complete a fifth year of study (45 quarter units of approved upper-division and/or graduate course work beyond the Bachelor of Arts). Continuing Education Units (CEU) are not applicable to the 45 quarter unit requirement. Students must also meet the health education, special education and computer literacy requirements (listed below) to obtain a professional clear credential.

1. *To fulfill the health education requirement students must take A and B below:*

A. One of the following courses to fulfill the drug/alcohol, tobacco and nutrition requirement (*with a grade of "C" or better*):

- HSci 332. Health Education in the Elementary School (4)
- HSci 333. Health Education in the Secondary School (4)
- HSci 364. Drug and Alcohol Use and Abuse (4)
- HSci 435. Health and Human Development (4)
- HSci 440. Family Health Issues for Educators (2)

B. Verification of current and valid CPR certification for infant/adolescent/adults.

2. *The following to fulfill the special education requirement (required for any single subject student who has not completed Education 330, Secondary Education 332, 422A, 422B, 440 and 445 at this university since the beginning of winter quarter of 1979):*
ESpe 530. Psychology and Education of Exceptional Individuals (4)

3. *The following are required to fulfill the computer literacy requirement:*

Level I

CSci 127. Introduction to Computer Technology for Educators (4)

or

ETec 537. Introduction to Computer Technology in Education (2)

Level II

ETec 546. Computer Based Technology in Education (4)

or

Mus 535. Computer Studies for Music Teachers (4) (for music students only)

Note: Pending state legislation may require curricular changes. Students must consult the current information sheet for this credential in the School of Education Office.

DESIGNATED SUBJECTS TEACHING CREDENTIAL PROGRAM (VOCATIONAL AND ADULT EDUCATION)

**Requirements (Part-time Credential 8 units,
Full-time Credential 16 units)**

Admission to the Program

Appropriate work experience and a high school diploma (or the equivalent) are required for admission to the Designated Subjects Teaching Credential Program. Applicants should have at least five years of verifiable work experience in the vocation, skill, or trade to be taught. Appropriate academic course work may be counted for up to two of the five years of required work experience. At least one year of the work experience must have been completed within the three years immediately preceding application for the credential.

Credential Requirements

Part-time Credential (8 units):

1. EVoc 501. Principles and Methods for Teaching Designated Subjects (4)
2. EVoc 518. Field Work in Designated Subjects (4)

Full-time Credential (16 units):

1. EVoc 501. Principles and Methods for Teaching Designated Subjects (4)
2. EVoc 502. Instructional Support for Teaching Designated Subjects (4)
3. EVoc 503. Contemporary Issues in Teaching Designated Subjects (4)
4. EVoc 518. Field Work in Designated Subjects (4)

Additional Requirements

(Full-time Credential)

Students must also complete:

One of the following to fulfill the United States Constitution requirement (or successful completion of an examination administered through the Office of Extended Education):

Hist 146. American Civilization (4)

Hist 200. United States History to 1877 (4)

Hist 540. Constitutional History of the United States (4)

PSci 203. American Government (4)

PSci 410. American Constitutional Law (4)

PSci 411. The Bill of Rights (4)

In both, part-time and full-time credentials, a "preliminary" credential is issued on the basis of documented work experience, and the "clear" credential issued after the applicant has completed the indicated course work, met the health education requirement (listed below) and actually taught under the "preliminary" credential.

Applicants having questions about designated subjects credentials should contact the Coordinator of the Vocational Education Program.

For information concerning the Bachelor of Vocational Education and the Bachelor of Science in Vocational Education, see Page 311.

Health education requirement

(Full-time Credential):

One of the following to fulfill the health education requirement:

HSci 332. Health Education in the Elementary School (4)

HSci 333. Health Education in the Secondary School (4)

HSci 364. Drug and Alcohol Use and Abuse (4)

HSci 435. Health and Human Development (4)

HSci 440. Family Health Issues for Educators (2)

Educ—	Education (general and core courses)
EAdv—	Advanced Education (listed on page 375)
ECIg—	Educational Counseling
EAdm—	Educational Administration (listed on page 387)
EEIB—	Elementary Education
EEnv—	Environmental Education (listed on page 378)
ERdg—	Reading Education (listed on page 378)
EReh—	Rehabilitation Counseling (listed on page 416)
ESec—	Secondary Education
ESpe—	Special Education
ETec—	Instructional Technology
EVoc—	Vocational Education (listed on pages 313, 384)

COURSE OFFERINGS IN EDUCATION (Educ)

Lower Division

200. Introduction to Careers in Education

Perspectives on public school teaching for potential elementary and secondary teachers. A minimum of 10 hours per quarter of guided field experience at an approved setting is required. (2 units)

201. Introduction to Tutorial Techniques

Introductory course in individual and small group instruction with emphasis on lesson planning, teaching methods and evaluation for tutorial settings. (2 units)

Upper Division

302. Education in American Society

Politics, organization, structure and philosophical concepts of schooling and education including an analysis of significant problems and issues in American education. Open to students in all majors. (4 units)

495. Expository Writing for Education

Writing related to education including documented research reports, evaluations, and analytical papers. Revision and rewriting will be required. Course fulfills the upper-division writing requirement. May not be counted for fulfilling major requirements for any degree program offered by the School of Education. No more than one of the expository writing courses (Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, Social Sciences 495) may be taken for credit. Students who have received a grade of no credit in any combination of the expository writing courses two or more times must meet with the 495 coordinator or a designee to design a developmental writing plan as a condition for enrolling for a third quarter. All students must obtain junior status at the time of registration or the course requested will be cancelled. Graded A, B, C/No credit. *Prerequisites:* English 101 and a minimum of 90 quarter (60 semester) units of college credit. (4 units)

542. Seminar in Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite:* graduate standing or consent of instructor. (Credit to be arranged: 1 to 4 units)

543. Individualized Instruction

An individualized course on techniques and procedures for constructing materials, tracking students, classroom management, learning centers, record keeping and media involvement for individualizing instruction at all levels. (4 units)

550. Internship Seminar

Seminar for elementary, secondary and bilingual interns, focusing on knowledge, skills and attitudes required of a first-year teacher. Graded credit/no credit. (Credit to be arranged: 1 to 4 units)

555. Internship Seminar II

Seminar for elementary, secondary and bilingual interns, focusing on knowledge, skills and attitudes required of a first-year teacher during their second quarter. Graded credit/no credit. *Prerequisite:* Education 550. (Credit to be arranged: 1 to 4 units)

556. Internship Seminar III

Seminar for elementary, secondary and bilingual interns, focusing on knowledge, skills and attitudes required of a first-year teacher during their third quarter. Graded credit/no credit. *Prerequisite:* Education 555. (Credit to be arranged: 1 to 4 units)

595. Independent Study

Special topics involving library and/or field research. *Prerequisites:* a minimum overall grade point average of 3.0, consent of instructor and school approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken. (Credit to be arranged: 1 to 4 units)

COURSE OFFERINGS IN EDUCATIONAL COUNSELING (ECIg)

Lower Division

222. College to Career

Introduction to personal interests, values and abilities as they impact educational and career exploration. Use of technology to help identify career choices and labor market trends. Techniques of job search as it relates to all college majors. (4 units)

COURSE OFFERINGS IN ELEMENTARY/BILINGUAL EDUCATION (EEIB)

Upper Division

300. Principles and Practices in Elementary Education

Ethical, social, legal, philosophical and crosscultural perspectives in elementary education. This course requires a field-based component including observation and participation in teaching at an approved setting. Meets CTC early field requirement. *Prerequisite: Education 200 or approved school-based experience.* (4 units)

321. Culture and Schooling

Basic understanding of the nature of "culture," its manifestations and the dynamics of crosscultural contact. Key issues of group and individual acculturation, assimilation, biculturalism, culture shock, and racism and their impact on educational practice. Includes a ten-hour field component at an approved setting. Also offered as Secondary Education 321, students may not receive credit for both. Meets the Commission on Teacher Credentialing (CTC) early field requirement. (4 units)

331. Growth and Development in Socio-Educational Contexts

Developmental characteristics of the young child and early adolescents in the areas of physiology, emotion, personality, cognition, and social relationships. Interaction between individual development and social and educational contexts as affected by culture, language, gender, sexual orientation, socio-economic status, or physical/emotional/learning handicaps. Includes a ten-hour field component at an approved setting. *Prerequisites: admission to the program and Elementary Education 321.* (4 units)

332. Educational Psychology for a Diverse Society

Overview of psychological principles applied to educational theory and practice. Course includes the use of humanistic, behavioral, anthropological and cognitive research to explore educational practices, student characteristics, learning processes, teaching strategies and classroom evaluation in the multicultural classroom. Requires a ten-hour field component at an approved setting. (Also offered as Secondary Education 332. Students may not receive credit for both.) Formerly Education 332 (or 330). *Prerequisites: admission to the program and Elementary Education 321 or consent of instructor.* (4 units)

333. Curriculum and Instruction for a Diverse Society

Overview of various social, theoretical, classroom and policy perspectives which are used to develop curriculum and instruction for language minority students. Examination of the role of verbal interaction in learning along with organizational models and instructional approaches used to augment students' primary and secondary language ability. Key issues and concepts include: first and second language acquisition theories, enrich-

ment versus deficit models of schooling; bilingual education; English as a second language (ESL) instruction; content instruction for language minority students; assessment and evaluation. Includes historical, legal, and educational foundations of bilingual education, organizational models and instruction approaches for the teaching and learning of language minority students. Requires a ten-hour field component at an approved setting. *Prerequisites: admission to the program and Elementary Education 321.* (4 units)

342. Curriculum and Methods for Early Childhood Education

Principles, methods and materials of instruction appropriate for young children. *Prerequisites: Elementary Education 300 and 331.* (4 units)

441. Mathematics Curriculum and Methods in the Elementary School

Introductory course in elementary curriculum and instruction for meaning-centered elementary mathematics education in a culturally diverse society. Requires a ten-hour field component including observation and participation in teaching at an approved setting. Formerly Elementary Education 340. *Prerequisites: admission to the program and Elementary Education 321, 331, 332 and 333.* (4 units)

443. Science Curriculum and Methods in the Elementary School

Introductory course in elementary curriculum and instruction for meaning-centered elementary science education in a culturally diverse society. Requires a ten-hour field component including observation and participation in teaching at an approved setting. Formerly Elementary Education 343. *Prerequisites: admission to the program and Elementary Education 321, 331, 332 and 333.* (4 units)

445. Reading/Language Arts Curriculum and Methods in the Elementary School

Materials, methods, strategies for teaching reading/language arts with an emphasis on meeting the educational needs of culturally diverse students. Includes a ten-hour field component including observation and participation in teaching at an approved setting. Formerly Elementary Education 345A. *Prerequisites: admission to the program and Elementary Education 321, 331, 332 and 333.* (6 units)

446. Reading/Language Arts (Primary Language) in the Elementary School

Curriculum and instruction for elementary language arts with an emphasis on literacy development of language minority students. Part of the course will be taught in Spanish. Includes a ten-hour field component including observation and participation in teaching at an approved setting. Formerly Elementary Education 345B. *Prerequisites: admission to the program and Elementary Education 331, 332, and 333.* (6 units)

447. Social Studies/Humanities Curriculum and Methods in the Elementary School

Introductory course in curriculum and instruction for elementary education in the social sciences and the humanities, in a culturally diverse society. Formerly Elementary Education 341. *Prerequisite: admission to student teaching. Corequisites: Elementary Education 450A and 451.* (4 units)

448. Social Studies/Humanities (Primary Language) in the Elementary Schools

Introductory course in curriculum and instruction for elementary education in the social sciences and the humanities, to meet the needs of language minority students. Part of the course will be taught in Spanish. Formerly Elementary Education 344. *Prerequisite: admission to student teaching. Corequisites: Elementary Education 450A and 451.* (4 units)

450. Elementary Student Teaching

Teaching in elementary grades in the public schools. Graded credit/no credit. Formerly Elementary Education 410A/410B/410C.

- A. Must be taken concurrently with Elementary Education 451 and 447 or 448. *Prerequisite: admission to student teaching.* (8 units)
- B. Must be taken concurrently with Elementary Education 452 and 480. *Prerequisites: Elementary Education 450A, 451 and 447 or 448.* (8 units)
- C. *Prerequisite: consent of department chair.* (8 units)

451. Specially Designed Academic Instruction in the Elementary School

Introductory course in designing instruction to meet academic and language needs of language minority students. Working within specific disciplines, student teachers will learn to adapt instruction to employ concepts from this course with students who are learning English. *Prerequisite: admission to student teaching. Corequisites: Elementary Education 450A and 447 or 448.* (2 units)

452. Second Language Acquisition in the Elementary School

Application of language learning principles through second language methodology. *Prerequisites: admission to student teaching, Elementary Education 450A, 451 and 447 or 448. Corequisites: Elementary Education 450B and 480.* (2 units)

455. Supervised Intern Teaching in Multiple Subject

Full-time teaching under the intern credential in elementary school. Interns are required to take three quarters of supervised intern teaching: 455A, 455B and 455C, in any order. Formerly Elementary Education 421A/421B/421C. Graded credit/no credit.

- A. *Corequisite: Elementary Education 554. Prerequisites: admission to the credential program, student teaching, and admission to the intern program.* (8 units)
- B. *Corequisite: Elementary Education 555. Prerequisite: Elementary Education 455A.* (8 units)
- C. *Corequisite: Elementary Education 556. Prerequisite: Elementary Education 455B.* (8 units)

480. Capstone Seminar

Seminar on issues in curriculum, instruction and assessment; reflection on all previous course work and experiences; and continuing development of the teaching portfolio to accompany second quarter elementary student teaching. *Prerequisites: admission to student teaching, Elementary Education 450A, 451 and 447 or 448. Corequisites: Elementary Education 450B and 452.* (2 units)

536. Teaching in a Multicultural Society

Cultural democracy and the quest for equal educational opportunity. Methods and teaching techniques for teaching in a multicultural setting. Developing cultural awareness of teachers to assist them in relating to and motivating culturally different students. (4 units)

541. Problems in Elementary Curriculum

Advanced study of some phase of the elementary school curriculum. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

542. Seminar in Elementary/Bilingual Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

545. Teaching Science in Elementary School

Intensive study of teaching science in elementary school. Exploration, analysis, interpretation and implementation of science process teaching. Intended for experienced teachers. *Prerequisite: consent of instructor.* (4 units)

551. Internship Seminar I

Seminar for elementary and bilingual interns, focusing on knowledge, skills and attitude required of a first year teacher during the first month of teaching. Graded credit/no credit. Formerly Education 550B. *Prerequisites: admission into the Multiple Subject CLAD or BCLAD Credential Program (Intern Track).* (2 units)

554. Internship Seminar II

Seminar for elementary and bilingual interns focusing on knowledge, skills and attitude required of a first year teacher. Included are strategies for designing instruction to meet academic and language needs of language minority students. Working within specific disciplines, interns will adapt instruction to employ concepts with students who are learning English. This course fulfills the credential requirement for Elementary Education 451. Formerly Education 550D. *Prerequisite: admission into the Multiple Subject CLAD or BCLAD Credential Program (Intern Track). Corequisite: Elementary Education 455A.* (4 units)

555. Internship Seminar III

Seminar for elementary and bilingual interns focusing on knowledge, skills and attitude required of a first year teacher. Included are strategies for the application of language learning principles through second language methodology. This course fulfills the credential requirement for Elementary Education 452. Formerly Education 555. Graded credit/no credit. *Corequisite: Elementary Education 455B. Prerequisite: admission to the Multiple Subject CLAD or BCLAD Credential Program (Intern Track).* (4 units)

556. Internship Seminar IV

Seminar for elementary and bilingual interns focusing on knowledge, skills and attitude required of a first year teacher. This seminar includes: discussion of issues in continuing development of the teaching work and experiences; continuing development of

the teaching portfolio. Fulfills the credential requirement for Elementary Education 480. Formerly Education 556. Graded credit/no credit. *Corequisite: Elementary Education 455C.* *Prerequisite: admission to the Multiple Subject CLAD or BCLAD Credential Program (Intern Track).* (4 units)

577. Mathematics Clinic

Administration of diagnostic instruments and assessment procedures to elementary school students, followed by prescription and initiation of remedial measures to strengthen the mathematics areas. *Prerequisites: Mathematics 301 and four additional quarter units in mathematics.* (4 units)

580. Advanced Teaching Strategies

Advanced teaching strategies, self and peer coaching for the improvement of teaching using a variety of clinical supervision models. (4 units)

COURSE OFFERINGS IN SECONDARY EDUCATION (ESec)

Upper Division

321. Culture and Schooling

Basic understanding of the nature of "culture," its manifestations and the dynamics of crosscultural contact. Key issues of group and individual acculturation, assimilation, biculturalism, culture shock, and racism and their impact on educational practice. Includes a ten-hour field component at an approved setting. Meets CTC early field requirement. (Also offered as Elementary Education 321. Students may not receive credit for both.) (4 units)

332. Educational Psychology for a Diverse Society

Overview of psychological principles applied to educational theory and practice. Course uses humanistic, behavioral, anthropological, and cognitive research to explore educational practices, student characteristics, learning processes, teaching strategies, and classroom evaluation in the multicultural classroom. Requires a ten-hour field component in an approved setting. Two hours lecture and two hours discussion. (Also offered as Elementary Education 332. Students may not receive credit for both.) Formerly Education 332 (or 330). (4 units)

333. Curriculum and Instruction for a Diverse Society

To provide students an overview of various social, theoretical, classroom and policy perspectives which have been used to explain the school performance of language minority students (LMS) and which have guided curricular/instructional decision making. Requires a ten-hour field component in an approved setting. (4 units)

421. Secondary Student Teaching

Full-time teaching in the junior or senior high school. Graded credit/no credit.

- A. Must be taken concurrently with Secondary Education 441 or its equivalent, or Secondary Education 480. *Prerequisites: Secondary Education 332, 440, 445 and admission to student teaching.* (8 units)

- B. Must be taken concurrently with Secondary Education 441 or its equivalent or Secondary Education 480. *Prerequisite: satisfactory completion of 421A.* (8 units)
C. *Prerequisites: satisfactory completion of 421A and 421B and consent of department chair.* (8 units)

422. Supervised Intern Teaching in Single Subject

Full-time teaching under the intern credential in junior or senior high school. Graded credit/no credit.

- A. *Prerequisite: consent of program coordinator.* (10 units)
B. *Prerequisites: satisfactory completion of 422A and consent of program coordinator.* (10 units)
C. *Prerequisites: satisfactory completion of 422B and consent of program coordinator.* (10 units)

440. Secondary School Curriculum and Instruction I

Introductory course in secondary curriculum and teaching methods with emphasis on instructional planning, strategies and evaluation, technology as applied to teaching, and classroom management. A minimum of ten hours per quarter of classroom observations in an approved setting is required. *Prerequisites: Education 200, Secondary Education 443 or Psychology 328 and admission to the program for the Single Subject Credential.* (4 units)

441. Secondary School Curriculum and Instruction II

Introductory course in secondary curriculum and teaching methods with emphasis on subject area materials, mediated materials, secondary curriculum and legal aspects of teaching as a profession. *Prerequisites: consent of department chair and admission to the Single Subject Credential program.*

- A. Art. May be taken prior to or concurrently with Secondary Education 421A. (4 units)
E. English. *Corequisite: Secondary Education 421A or 421B.* (4 units)
F. Foreign Language. May be taken prior to or concurrently with Secondary Education 421A. (4 units)
H. Music. May be taken prior to or concurrently with Secondary Education 421A. (4 units)
L. Life and Physical Sciences. (4 units)
M. Mathematics. *Corequisite: Secondary Education 421A or 421B.* (4 units)
O. Other. *Corequisite: Secondary Education 421A or 421B.* (4 units)
P. Physical Education. May be taken prior to or concurrently with Secondary Education 421A. (4 units)
S. Social Sciences. *Corequisite: Secondary Education 421A or 421B.* (4 units)

443. Adolescent Development and Educational Contexts

Organization of middle school and high school education will be examined. Interaction between adolescent development and community and school contexts will be studied in relation to current research and practice. Includes a ten-hour field component at approved settings. *Prerequisites: Secondary Education 321, 332 and 333.* (4 units)

445. Teaching Reading and Writing in Secondary School Subjects

Methods of diagnosing and teaching specific reading and writing skills in secondary school subjects. A minimum of 24 hours per quarter of field experiences in an approved setting is required. *Prerequisites: Education 200; Secondary Education 443 or Psychology 328 and admission to the Single Subject Credential program.* (4 units)

480. Student Teaching Seminar

- A. Seminar to accompany the first quarter of student teaching. Includes curriculum planning, instruction, student evaluation, and classroom management with assignments related to the student teaching placement. (2 units)
- B. Seminar to accompany the second quarter of student teaching. Culminating experience of the teacher preparation program. Students will prepare a portfolio that documents professional development and provides the means to assess program experiences and future professional growth. (2 units)

510. Teaching English as a Second Language in Secondary Schools

Offers a broad overview of approaches and methods used in language teaching, but will focus specifically on practices that can support the development of English language proficiencies needed for success in secondary schools. *Prerequisites: Secondary Education 321 and 333.* (4 units)

515. Issues and Trends in Secondary Education

Examination of issues and trends in secondary education. May be repeated with consent of advisor. *Prerequisite: consent of advisor.* (2 units)

516. Models of Teaching and Advanced Teaching Methodology

Demonstration and discussion on various models of teaching and advanced teaching methods relevant to secondary school classrooms. (4 units)

517. Middle School Curriculum and Instruction

Examination of middle school curriculum design and instructional practices. (4 units)

521. Instructional Strategies and Approaches to Middle Grade

Instructional methods, techniques and evaluation procedures especially appropriate for middle schools. (4 units)

522. Practicum in Middle Grade Education

Practicum for middle grade philosophies, objectives, and functions. *Prerequisites: Secondary Education 443, 517 and 521.* (4 units)

542. Seminar in Secondary Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

545. Adolescents Literacy Tutoring

Tutor training for students to work with low literacy and at-risk adolescents in reading. Topics include literacy methods, multicultural issues, learning disabilities and use of educational software. 20 hours lecture and 48 hours of tutoring an adolescent in a field-based setting. *Prerequisite: consent of instructor.* (4 units)

554. Internship Seminar I

Seminar for secondary interns, focusing on knowledge, skills and attitudes required of a first-year teacher. Graded credit/no credit. *Prerequisite: admission to Single Subject Teaching Credential Internship Track.* (2 units)

555. Internship Seminar II

Seminar for secondary interns, focusing on knowledge, skills and attitudes required of a first year teacher. Graded credit/no credit. *Prerequisite: Secondary Education 554.* (2 units)

556. Internship Seminar III

Seminar for secondary interns, focusing on knowledge, skills and attitudes required of a first year teacher. Graded credit/no credit. *Prerequisite: Secondary Education 555.* (2 units)

560. Study Skills for Secondary School

Programs, methods and materials for teaching study skills to exceptional junior and senior high school students. Study strategies include: note taking, organization, memory devices, study contracts and preparation for examinations. (4 units)

COURSE OFFERINGS IN SPECIAL EDUCATION (ESpe)

Upper Division**523. Mainstreaming Handicapped Individuals in the Elementary Classroom**

Introduction to the adaptation of curriculum, methods and materials necessary for accommodating exceptional individuals in the regular elementary classroom. (2 units)

529. Introductory Methods for Special Education Interns

Instruction in the characteristics of students with disabilities, positive classroom and behavior management, effective instruction skills, modification of core curriculum, curriculum-based assessment, effective relationships with paraprofessionals, and applicable special education rules and regulations. (4 units)

530. Psychology and Education of Exceptional Individuals

Characteristics and educational implications of physical, intellectual, social and emotional deviations among exceptional individuals. Ethical and legal aspects of special education. Observations in educational settings. (4 units)

532. Introduction to Teaching Individuals with Exceptional Needs

Learning characteristics of individuals with handicaps related to educational procedures and intervention strategies. Study and observation of education and intervention theory and practices. *Prerequisite: Special Education 530 or consent of instructor.* (4 units)

535. Counseling Exceptional Individuals and Their Families

Procedures in establishing rapport with handicapped individuals, methods of behavior control, counseling techniques and development of programs for parents of exceptional individuals. *Prerequisites: Special Education 530, 532 or consent of instructor.* (4 units)

538. Introduction to Teaching the Gifted and Talented

Definition, characteristics and development of the gifted and talented individual. Identification procedures. Current legislation and educational practices. Eight hours of class and activities weekly. *Prerequisite: consent of instructor.* (4 units)

539. Programs for Teaching the Gifted and Talented

Development of school programs for gifted and talented: identification, objectives, scheduling, curriculum, materials and program assessment. *Prerequisites: Special Education 538 and consent of instructor.* (4 units)

540. Strategies for Remedial Teaching

Methods of diagnosing needs, teaching basic subjects; organizing curriculum, and controlling behavior of low achieving students in the regular elementary classroom. (4 units)

542. Seminar in Special Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

542. Seminar in Instructional Technology

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

544. Construction of Instructional Materials

Various ways to design and produce instructional materials. Emphasis on use of media to meet instructional objectives. Procedures for systematic evaluation of instructional materials. (4 units)

546. Computer Based Technology in Education

Introduction to computer applications, computer-based technology, computer-assisted instruction, programming and authoring languages, and teacher utility programs in educational settings. Meets Level IIB competencies for the clear credential. Three hours lecture and two hours laboratory. *Prerequisite: Instructional Technology 537.* (4 units)

547. Educational Technology

Introduction to instructional systems. Components to include video-disc, satellite down links, computers, brain games and video. Storage and retrieval systems will be included. *Prerequisite: consent of instructor.* (4 units)

548. Seminar in Instructional Design

Theories of instruction; design and production of instructional modules including specification and analysis of objectives, measurement, instructional activities and selection of methods and materials and evaluation techniques. *Prerequisite: consent of instructor.* (4 units)

COURSE OFFERINGS IN INSTRUCTIONAL TECHNOLOGY (ETec)

Upper Division**537. Introduction to Computer Technology in Education**

Operations, terminology and components of computing systems are introduced. Emphasis is on applications including word processing, data base and spreadsheet. No programming or previous computer experience required. May not be taken for credit by students who have received credit for Computer Science 127. One hour lecture and two hours laboratory. Meets Level I competencies for the clear credential. (2 units)

ENGLISH

Department of English

University Hall, Room 334
880-5824

Bachelor of Arts

English
Literature Track
Creative Writing Track

Teaching Credential Program

English

Minor

English

Master of Arts

English Composition
Teaching English as a Second Language
(Degree requirements can be found on Page 389.)
Secondary Education—English Option
(Degree requirements can be found on Page 360.)

Certificate Programs

Creative Writing
Professional Writing

FACULTY: Melissa Axelrod, Rise Axelrod, James Brown, Rong Chen, Milton Clark, Juan Delgado, Margaret Doane, Bertram (Pete) Fairchild, Catherine Gannon, Gregory Gilbert, Bruce Golden, Carol Haviland, Sung-Heh Hyon, Sandra Kamusikiri, Larry Kramer, Lorelee MacPike (Acting Chair), E. Clark Mayo, Susan Meisenhelder, E. Philip Page, Elinore Partridge, Renee Pigeon, Dian Pizurie, Kellie Rayburn, Treadwell (Ted) Ruml II, DeShea Rushing, Peter Schroeder, Rodney Simard, Wendy Smith, Edward White, Salaam Yousif

The English Department at California State University, San Bernardino is, like most college or university English departments, devoted mainly to the study of literature and language. The literature courses are arranged in different ways; some analyze a specific genre (poetry, fiction, drama); some treat a particular period (the sixteenth century, the romantic period); some deal with an individual author, area or problem (Shakespeare, modern American poetry, black literature, fantasy).

The department offers additional courses in the history and structure of the language and in advanced composition. Courses in creative writing give students the opportunity to write poetry or fiction under the direction of an experienced writer.

The English Department also sponsors *The Pacific Review*, a literary journal mingling professional and student contributions, and work on *The Pacific Review* staff provides excellent training for students in editorial work.

As language and culture are understood best in a global context, the English Department encourages students to participate in the California State University's International Programs. For further information, see Page 22.

B.A. IN ENGLISH

Requirements (68 units)

Requirements for the B.A. in English:

Lower-division requirements (12 units)

1. Eng 230. English Literature I (4)
2. Eng 231. English Literature II (4)
3. Eng 232. English Literature III (4)

Upper-division requirements (56 units)

1. Eng 311. The English Language (4)
2. Eng 330. American Literature I (4)
3. Eng 331. American Literature II (4)
4. Eng 332. American Literature III (4)
5. *Eight units chosen from:*
 - Eng 301. Analysis of Poetry (4)
 - Eng 302. Analysis of Drama (4)
 - Eng 303. Analysis of Prose Fiction (4)
6. *Four units chosen from:*
 - Eng 475. Shakespeare I (4)
 - Eng 476. Shakespeare II (4)
7. *Four units chosen from:*
 - Eng 314. American Indian Literature (4)
 - Eng 319. Studies in Literary Diversity (4)
 - Eng 323. Chicano Literature (4)
 - Eng 336. Women Writers (4)
 - Eng 339. African American Literature (4)
8. *Twenty-four units chosen from one of the following tracks (A or B):*
 - A. Literature Track

To be recommended for the teaching credential, students must complete the Literature track and must include the courses specified under the Teaching Credential Program requirements below.

1. *Four units chosen from:*
 - Eng 321. Studies in Language and Linguistics (4)
 - Eng 322. Studies in Literary Themes, Genres, or Authors (4)
 - Eng 333. Myth and Epic (4)
 - Eng 335. Studies in the Novel (4)
 - Eng 385. Introduction to Literary Criticism (4)
2. *Four units chosen from:*
 - Eng 401. English Literature of the Middle Ages (4)
 - Eng 403. English Literature of the Renaissance (4)
 - Eng 406. Seventeenth Century Literature (4)
 - Eng 409. English Literature of the Restoration and Eighteenth Century (4)
 - Eng 412. Romantic Prose and Poetry (4)
 - Eng 415. Victorian Literature (4)
 - Eng 442. Modern Poetry (4)
 - Eng 443. Contemporary Poetry (4)
 - Eng 446. Modern Fiction (4)

3. *Four units chosen from:*

Eng 510. English in the Secondary Classroom (4) (Must be taken by students who wish to be recommended for the Teaching Credential in English.)

Eng 515. Senior Seminar in Literature (4)

4. *Twelve units of upper-division electives, which may include Humanities 312 and up to eight units of foreign literature or literature in translation.*

B. Creative Writing Track

1. Eng 317. Introduction to Creative Writing: Poetry (4)

2. Eng 318. Introduction to Creative Writing: Fiction (4)

3. Eng 513. Advanced Creative Writing (4)

4. *Four units chosen from:*

Eng 513. Advanced Creative Writing (4)

Eng 522. Independent Study in Writing (4)

5. *Eight units of upper-division electives, which may include Humanities 312 and courses in foreign literature or literature in translation.*

Note: It is strongly recommended that students majoring in English take English 495 to satisfy the upper-division writing requirements of the university; however, English 495 is not applicable toward the English major.

Students planning to do graduate work in English literature are strongly advised to acquire a reading knowledge of at least one foreign language.

TEACHING CREDENTIAL PROGRAM

In order to be recommended for the teaching credential (English subject matter program), students must complete the requirements for either the literature track or the creative writing track in English as well as the following requirements:

- Students must include among their English electives within their track:
 - Eng 510. English in the Secondary Classroom (4) *and one of the following:*
 - Eng 420. Pedagogical Grammar (4)
 - Hum 312. Theories of Language Acquisition and Learning (4)
- Students must take English 495 or Humanities 495 to satisfy the upper-division writing requirement of the university.
- Students must demonstrate familiarity with appropriate educational technology. They may do so by one of the following two methods:
 - successful completion of one of the following courses:
 - CSci 127. Introduction to Computer Technology for Educators
 - Comm 245. Introduction to TV and Video Production
 - submitting to the Chair of the English Department evidence, verified by professional staff or faculty,

that the student has either interned in a computer-equipped writing lab or had work experience in which the student used forms of technology appropriate for the study and teaching of literature, composition, language, linguistics or other related fields. (Experience limited to just word-processing will not be credited.)

Prior to student teaching, students must demonstrate subject matter competence as assessed by the department of English. For information about the professional education component, prerequisites for and admission to the teacher education program, or specific requirements of the single subject teaching credential program, see Page 146 or contact the School of Education C.A.S.E.-Student Teaching Office.

For subject matter programs in English with concentration in Communication or Theatre Arts, see listings under the Communication Studies or Theatre Arts Departments respectively.

MINOR IN ENGLISH

Requirements (32 units)

Requirements for a minor in English:

- Eng 311. The English Language (4)
- Four units chosen from:*
 - Eng 301. Analysis of Poetry (4)
 - Eng 302. Analysis of Drama (4)
 - Eng 303. Analysis of Prose Fiction (4)
- Eight units chosen from:*
 - Eng 230. English Literature I (4)
 - Eng 231. English Literature II (4)
 - Eng 232. English Literature III (4)
 - Eng 330. American Literature I (4)
 - Eng 331. American Literature II (4)
 - Eng 332. American Literature III (4)
- Four units chosen from:*
 - Eng 475. Shakespeare I (4)
 - Eng 476. Shakespeare II (4)
- Four units chosen from:*
 - Eng 401. English Literature of the Middle Ages (4)
 - Eng 403. English Literature of the Renaissance (4)
 - Eng 406. Seventeenth Century Literature (4)
 - Eng 409. English Literature of the Restoration and Eighteenth Century (4)
 - Eng 412. Romantic Prose and Poetry (4)
 - Eng 415. Victorian Literature (4)
 - Eng 442. Modern Poetry (4)
 - Eng 443. Contemporary Poetry (4)
 - Eng 446. Modern Fiction (4)
- Four units chosen from:*
 - Eng 314. American Indian Literature (4)
 - Eng 319. Studies in Literary Diversity (4)
 - Eng 323. Chicano Literature (4)
 - Eng 336. Women Writers (4)
 - Eng 339. African American Literature (4)

7. *Four additional units chosen from any upper-division English course except:*

- Eng 300. English Workshop
- Eng 399. Community Service Project
- Eng 495. Expository Writing

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Writing: Creative Writing

Certificate Requirements (32 units)

1. Eng 317. Introduction to Creative Writing: Poetry (4)
2. Eng 318. Introduction to Creative Writing: Fiction (4)
3. Eng 495. Expository Writing (4)
4. Eng 513. Advanced Creative Writing (4)
5. *Four units chosen from:*
 - Eng 301. Analysis of Poetry (4)
 - Eng 302. Analysis of Drama (4)
 - Eng 303. Analysis of Prose Fiction (4)
6. Four units chosen from any 400-level literature course.
7. *Eight units from any upper-division English course to include at least four units chosen from:*
 - Eng 522. Independent Study in Writing (4)
 - Eng 621. Approaches to Imaginative Writing (4)

Certificate in Writing: Professional Writing

Certificate Requirements (31 units)

Lower-division requirements (7 units)

1. Comm 240. Writing for Media (4)
2. Comm 243A. Communication Practicum: Journalism, Photojournalism and Public Relations (3)

Upper-division requirements (24 units)

1. Eng 311. The English Language (4)
2. Eng 495. Expository Writing (4)
3. *Eight units chosen from:*
 - Comm 342. Newspaper Editing and Makeup (4)
 - Comm 442. Public Relations Campaigns (4)
 - Eng 631. Approaches to Professional Writing (4)
4. *Eight units chosen from Groups A or B below:*
 - Group A:
 1. *Four units chosen from:*
 - Eng 420. Pedagogical Grammar (4)
 - Eng 422. History of the English Language (4)
 - Phil 484. Philosophy of Language (4)
 2. *Four units chosen from:*
 - Comm 311. Business and Professional Communication (4)

- Comm 342. Newspaper Editing and Makeup (if not taken as a required course) (4)
- Eng 522. Independent Study in Writing (4)
- Eng 565. Special Studies in Writing (with appropriate subject) (2)
- Eng 566. Special Studies in Writing (with appropriate subject) (4)
- Eng 631. Approaches to Professional Writing (if not taken as a required course) (4)

Group B:

1. *Eight units chosen from:*

- Comm 311. Business and Professional Communication (4)
- Comm 342. Newspaper Editing and Makeup (if not taken as a required course) (4)
- Eng 522. Independent Study in Writing (4)
- Eng 565. Special Studies in Writing (with appropriate subject) (2)
- Eng 566. Special Studies in Writing (with appropriate subject) (2)
- Eng 631. Approaches to Professional Writing (if not taken as a required course) (4)

COURSE OFFERINGS IN ENGLISH (Eng)

Lower Division

85. Basic English

A two-quarter course designed specifically for students who score at or within the lowest quartile of the English Placement Test. Emphasis on developing fundamental skills in writing and conceptualizing. English 85 does not apply toward baccalaureate credit. Those students who achieve the requisite grade at the end of the quarter after taking English 85A or 85B may enroll in English 101. Other students who do not receive this grade at the end of 85B must enroll in English 95. Graded credit/satisfactory progress/no credit.

A. First Quarter (4 units)

B. Second Quarter (4 units)

95. Intensive English

Intensive work in writing fundamentals. Graded A, B, C/No credit. May not be taken for credit by students who have received credit for English 101. Three hours lecture and one hour writing laboratory. English 95 does not apply toward baccalaureate credit. *Prerequisite: open only to students who score above the lowest quartile on the English Placement Test or who have completed English 85B with satisfactory credit.* (4 units)

101. Freshman Composition

Analytical study of the language and structure of prose to help students develop a clear, mature and flexible expository style. Frequent writing required. Graded A, B, C/No credit. *Prerequisite: essay score of seven or greater and total score of 150 or greater on the English Placement Test, or completion of the test and at least a grade of "C" in English 95. (CAN ENGL 2) (4 units)*

110. World Literature I

Readings in world literature to the sixteenth century (in English translation). *Prerequisite: English 101 or equivalent.* (4 units)

111. World Literature II

Readings in world literature from the sixteenth century to the contemporary period (in English translation). *Prerequisite: English 101 or equivalent.* (4 units)

140. Major American Authors

Readings in major figures in American literature from the Puritans to the present. (4 units)

160. World Drama

Selected readings of dramatic literature (in translation) from the 5th century B.C. to the 19th century. (Also offered as Theatre Arts 160. Students may not receive credit for both.) *Prerequisite: English 101 or equivalent.* (4 units)

170. Studies in Literature

Analysis of the forms and content of literature. Emphasis is on the methodology of reading prose fiction, drama and poetry. *Prerequisite: English 101 or equivalent.* (4 units)

230. English Literature I

Readings in English literature from the Middle Ages through the Renaissance. Formerly English 120. (CAN ENGL SEQ B) (4 units)

231. English Literature II

Readings in English literature from the Restoration through the eighteenth century. Formerly English 121. (CAN ENGL SEQ B) (4 units)

232. English Literature III

Readings in English literature from the Romantics through the present. Formerly English 121. (CAN ENGL SEQ B) (4 units)

Upper Division**300. English Workshop**

An intermediate-level refresher course in writing designed to prepare students for advanced work in composition. Concentration on specific techniques. May not be counted toward fulfilling requirements in the English major and does not fulfill the upper-division writing requirement. Not open to students who have already completed Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495 or Social Sciences 495. Graded A, B, C/No credit. *Prerequisite: English 101.* (4 units)

301. Analysis of Poetry

Literary analysis of selected lyric poems with special emphasis on how to write about literature. *Prerequisite: English 101.* (4 units)

302. Analysis of Drama

Literary analysis of selected plays with special emphasis on how to write about dramatic literature. (Also offered as Theatre Arts 302. Students may not receive credit for both.) *Prerequisite: English 101.* (4 units)

303. Analysis of Prose Fiction

Literary analysis of selected pieces of narrative prose with special emphasis on how to write about literature. *Prerequisite: English 101.* (4 units)

Students are strongly advised to take one or more of the analysis courses (English 301, 302, 303) before taking other upper-division courses.

311. The English Language

Introduction to the structure and development of the English language, including phonetics, phonology, morphology, syntax, pragmatics, sociolinguistics, psycholinguistics, and language acquisition. (4 units)

314. American Indian Literature

A consideration of the oral traditions and significant literary works of a variety of American Indian cultures in their changing cultural contexts. (4 units)

317. Introduction to Creative Writing: Poetry

Workshop in writing poetry, discussion of student writing and exemplary works by established poets. *Prerequisite: English 101 or consent of instructor.* (4 units)

318. Introduction to Creative Writing: Fiction

Workshop in writing fiction, discussion of student writing and exemplary works by established authors. *Prerequisite: English 101 or consent of instructor.* (4 units)

319. Studies in Literary Diversity

Intensive study of literature which reflects diversity, especially of race, gender, class or culture. May be repeated for credit as topics change. May be taken for credit by students who have received credit for English 322, credit may not be received twice for the same topic. (4 units)

320. Children's Literature

History and development of children's literature; emphasis on developing skills in analyzing, evaluating and selecting books for children from preschool through junior high school, especially picture books. *Prerequisite: English 301, 302, or 303.* (4 units)

321. Studies in Language and Linguistics

Intensive study in selected topics in language structure, development, and use. May be repeated for credit as topics change. (4 units)

322. Studies in Literary Themes, Genres, or Authors

Intensive study of selected themes, genres, or authors. May be repeated for credit as topics change. Formerly English 315, credit may not be received twice for the same topic. (4 units)

323. Chicano Literature

Selected literature by and about Mexican Americans. Emphasis on the uniqueness of the voices that collectively define Chicano literature and on that literature's formal and thematic characteristics. Formerly English 322X. (4 units)

327. Literature for Adolescents and Young Adults
History and analysis of literature aimed at the adolescent and young adult audience. Emphasis on literary and cultural values by exploration of the themes and genres appropriate for junior and senior high school readers. *Prerequisite: English 301, 302 or 303.* (4 units)

330. American Literature I
Readings in American literature from the Colonial period through the early American Romantics. Formerly English 430. (4 units)

331. American Literature II
Readings in American literature from the Romantics through the American Renaissance. Formerly English 432. (4 units)

332. American Literature III
Readings in American literature from the Gilded Age to the present. Formerly English 436. (4 units)

333. Myth and Epic
Myths and epics of folklore and of classical literature, emphasizing relationship to later Western literature. (4 units)

335. Studies in the Novel
Studies in the novel with emphasis on close reading of specific texts. (4 units)

336. Women Writers
Literary analysis of selected works by women writers, with special emphasis on historical and contemporary issues in women's lives. (Also offered as Women's Studies 336. Students may not receive credit for both.) (4 units)

339. African American Literature
Readings in African American literature from the oral tradition to the present, with emphasis on literary, historical and cultural contexts. Formerly English 439. (4 units)

347. Playwrighting
Fundamentals of play development, to include plot, character, structure, and theme, culminating in individual performable scripts. (Also offered as Theater Arts 347. Students may not receive credit for both.) *Prerequisite: English or Theater Arts 302, or consent of instructor.* (4 units)

385. Introduction to Literary Criticism
The major issues in literary criticism considered in historical perspective. (4 units)

399. Community Service Project
Credit for applying previously learned skills in the area of English to academically related tasks in such agencies as governmental, social services and educational institutions. May be repeated for a total of two units. Graded credit/no credit. *Prerequisite: departmental approval of a written application submitted in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 or 2 units)

401. English Literature of the Middle Ages
Lyric, drama, prose and verse narrative from the beginnings of English literature through Malory. (4 units)

403. English Literature of the Renaissance
Poetry, prose and drama of the 16th century. (4 units)

406. Seventeenth Century Literature
English prose and poetry from Bacon through Milton. (4 units)

409. English Literature of the Restoration and Eighteenth Century
English poetry and prose of the Restoration and eighteenth century. (4 units)

412. Romantic Prose and Poetry
Major English romantics such as Blake, Wordsworth, Keats, Coleridge, Shelley and Byron. (4 units)

415. Victorian Literature
Major writers of Victorian England. (4 units)

420. Pedagogical Grammar
Application of current linguistic theories to the analysis of grammatical structures pertinent to the teaching of English as a first and second language. Formerly English 500. *Prerequisite: English 311.* (4 units)

422. History of the English Language
Development of the English language from the beginning to the present. Formerly English 505. *Prerequisite: English 311.* (4 units)

442. Modern Poetry
Studies in British, American and European poetry from the late nineteenth century to World War II. *Prerequisite: English 301.* (4 units)

443. Contemporary Poetry
Studies in British and American poetry from World War II to the present. *Prerequisite: English 301.* (4 units)

446. Modern Fiction
Modern and contemporary fiction. (4 units)

450. Classical Drama
Development of comedy and tragedy in Greece and Rome. (Also offered as Theatre Arts 450. Students may not receive credit for both.) (4 units)

455. Modern Drama I
European, English and American realism. (Also offered as Theatre Arts 455. Students may not receive credit for both.) (4 units)

456. Modern Drama II
European, English and American anti-realism. (Also offered as Theatre Arts 456. Students may not receive credit for both.) (4 units)

475. Shakespeare I
Comedies and histories. (Also offered as Theatre Arts 475. Students may not receive credit for both.) (4 units)

476. Shakespeare II
Tragedies and romances. (Also offered as Theatre Arts 476. Students may not receive credit for both.) (4 units)

495. Expository Writing

Advanced expository writing including documented research reports, summaries and analytical papers. Revision and rewriting will be required. Course fulfills the graduation requirement in writing proficiency. No more than one of the Expository Writing courses (Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, Social Sciences 495) may be taken for credit. Students who have received a grade of no credit in any combination of the expository writing courses two or more times must meet with the 495 coordinator or a designee to design a developmental writing plan as a condition for enrolling for a third quarter. All students must obtain junior status at the time of registration or their course request will be cancelled. Graded A, B, C/ No credit. *Prerequisites: English 101 and a minimum of 90 quarter (60 semester) units of college credit.* (4 units)

510. English in the Secondary Classroom

English as a secondary school subject including language, literature and composition. Special emphasis on problems of improving and assessing student writing. *Prerequisites: English 311, 495 and at least two courses from English 301, 302, 303.* (4 units)

513. Advanced Creative Writing

Intensive writing workshop in one genre: poetry, fiction, autobiography or others. Emphasis will change from quarter to quarter. May be repeated for credit as subject matter changes. *Prerequisite: English 317 or English 318 or consent of instructor.* (4 units)

515. Senior Seminar in Literature

Advanced study of a selected literary topic, including consideration of critical theory and methodology. May be repeated for credit as topics change. *Prerequisites: senior standing and completion of at least two analysis classes (English 301, 302 or 303), and at least two additional upper-division courses in English.* (4 units)

522. Independent Study in Writing

Projects in advanced writing: fiction, non-fiction, poetry or drama. A total of eight units may apply to the English major or toward graduation. *Prerequisites: English 513 and departmental approval; students must be enrolled in the Creative Writing track and the project must be approved by an instructor.* (4 units)

523. English Syntax

A linguistic approach to the analysis of modern English sentences and their component parts. Emphasis is placed on practical experience in analyzing structures in context. *Prerequisites: English 311 and 420.* (4 units)

524. Sociolinguistics

An examination of language within social and cultural contexts, including ethnic, social and regional dialect variations in the United States. *Prerequisites: English 311 and 420.* (4 units)

525. Seminar in Criticism

Advanced study in special topics in literary criticism. May be repeated for credit as topics change. (4 units)

526. English Phonetics and Phonology

Sounds and sound patterns of spoken English, with special attention to the pronunciation problems encountered by learners of English as a second language. *Prerequisite: English 311.* (4 units)

530. Methods of Tutoring Writing

Study of the theory, principles and methods of tutoring students who need specific practice in writing. Those completing this course with a grade of "B" or better are eligible to participate in tutorial writing services on campus. Students in this class are expected to be proficient writers. May be repeated once for credit. *Prerequisites: English 101 and consent of instructor.* (2 units)

565. Special Studies in Writing

Studies in particular topics in writing, such as assessment, learning theory and research on the teaching of writing. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

566. Special Studies in Writing

Studies in particular topics in writing, such as assessment, learning theory and research on the teaching of writing. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (4 units)

575. Internship in English

Supervised learning experience applying English-related skills in a work setting. A total of eight units may be applied toward graduation. Graded credit/no credit. Generally assumes 30 hours of work/study per unit of credit. *Prerequisites: junior standing with at least 16 units of course work in English on this campus with an overall grade point average of 3.0 or better; consent of instructor; and departmental approval of a written proposal submitted in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

595. Independent Study in Literature, Composition, or Linguistics

Independent study of selected themes, figures, and areas in literature, composition, or linguistics. May be repeated for a maximum of eight units of credit toward the B.A. in English and toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor, and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

ENVIRONMENTAL STUDIES

Department of Geography

Faculty Office Building, Room 249
880-5519

Bachelor of Arts

Environmental Studies - Track A

Environmental Studies - Track B

COORDINATOR: Jeffrey Hackel

To accomplish its principal objective of promoting an understanding of the interaction of human beings with their environment, this interdisciplinary degree program includes courses primarily from the natural sciences and social sciences.

Major requirements from the natural sciences develop fundamental principles about the composition and functioning of the earth's ecosystems, principles deemed essential to a sound working knowledge of the environment. Course offerings from the social sciences assess the impact of human beings upon the environment and the possibility of creating different environments.

The program is designed for students who desire either to focus on a study of the environment as part of a broader liberal arts curriculum or to prepare for an environmentally related career or graduate school. Professional opportunities for graduates include a wide range of positions in public agencies responsible for developing and enforcing environmental controls, and in business, industry and nonprofit organizations which need qualified individuals to communicate environmental information and to assist in compliance with environmental regulations. Additional opportunities are available in conjunction with other programs of study, such as environmental law, environmental health, education and public administration.

B.A. IN ENVIRONMENTAL STUDIES - TRACK A

Requirements (76 units)

Requirements for the B.A. in Environmental Studies—Track A:

Lower-division requirements (24 units)

1. *Five units chosen from:*
 - Biol 202. Biology of Populations (5)
 - Biol 250. Biology of Ecosystems (5)
2. Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
3. *A minimum of fourteen units chosen from:*
 - Anth 100. Introduction to Anthropology: Human Evolution (4)
 - Biol 200. Biology of the Cell (5)
 - Biol 201. Biology of Organisms (5)

- Chem 206. Fundamentals of Chemistry II: Organic Chemistry (5)
- Geog 103. Physical Geography (5)
- Geol 101. Physical Geology (5)
- HSci 120. Health and Society: An Ecological Approach (5)

May choose only one of the following:

- Phys 100. Physics in the Modern World (5)
- Phys 121. Basic Concepts of Physics I (5)

Upper-division requirements (26 units)

1. *Four units chosen from:*
 - Econ 360. Economics of the Environment (4)
 - HSci 478. Environmental Health Management (4)
2. Geog 300. Map Interpretation (2)
3. *Four units chosen from:*
 - Geog 304. Field Methods in Geography (4)
 - Geog 305. Geographic Research Methods (4)
 - Geog 306. Remote Sensing of Environment (4)
 - Geog 350. Conservation and Natural Resources (4)
5. *Four units chosen from:*
 - Geog 360. Climate and Vegetation (4)
 - Geog 460. Biogeography (4)
6. *Four units chosen from:*
 - Geog 480. Geomorphology (4)
 - Geol 440. Geology of California (4)
7. *Four units chosen from:*
 - Math 305. Statistics: Hypothesis Testing and Estimation (4)
 - SSci 215. Statistics for the Social Sciences (4)

Electives (a minimum of 26 units)

A minimum of 26 units chosen from Groups 1 and 2 below: (Students must take at least two courses from each of the following groups provided that none have been used elsewhere to meet requirements of this major.)

Group 1:

- Biol 220. Principles of Microbiology (5)
- Biol 319. Local Flora (5)
- Biol 321. Evolution (4)
- Biol 370. Symbiosis (4)
- Biol 450. Ecology (5)
- Geog 460. Biogeography (4)
- HSci 322. Air Pollution (2)
- HSci 324. Radiological Health and Safety (2)
- HSci 352. Environmental Health I (4)
- HSci 353. Environmental Health II (5)
- HSci 357. Hazardous Materials Control (4)

Group 2:

- Anth 475. Cultural Ecology (4)
 - Econ 360. Economics of the Environment (4)
- May choose only one of the following:*
- Geog 301. Cartography (4)
 - Geog 303. Computer Cartography (4)
 - Geog 304. Field Methods in Geography (4)
 - Geog 380. Population Geography (4)
 - Geog 415. Urban Planning and Land Development (4)
 - Geog 470. Hydrology and Water Resources (4)
 - HSci 478. Environmental Health Management (4)
 - PSci 342. The Politics of Environment (4)

Optional courses not a part of the major: Students are encouraged to continue their studies of the environment through the use of independent study courses and approved internships.

B.A. IN ENVIRONMENTAL STUDIES - TRACK B

Requirements (77 units)

Requirements for the B.A. in Environmental Studies—Track B:

Lower-division requirements (37 units)

1. Biol 200. Biology of the Cell (5)
2. Biol 201. Biology of Organisms (5)
3. Biol 202. Biology of Populations (5)
4. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
5. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
6. Chem 245. Modern Quantitative Analysis (5)
7. Choose one of the following:
 - Phys 100. Physics in the Modern World (5)
 - Phys 121. Basic Concepts of Physics I (5)

Upper-division requirements (24 units)

1. Four units chosen from:
 - Econ 360. Economics of the Environment (4)
 - HSci 478. Environmental Health Management (4)
2. Four units chosen from:
 - Geog 304. Field Methods in Geography (4)
 - Geog 305. Geographic Research Methods (4)
 - Geog 306. Remote Sensing of Environment (4)
3. Geog 350. Conservation and Natural Resources (4)
4. Four units chosen from:
 - Geog 360. Climate and Vegetation (4)
 - Geog 460. Biogeography (4)
5. Four units chosen from:
 - Geog 480. Geomorphology (4)
 - Geol 440. Geology of California (4)
6. Math 305. Statistics: Hypothesis Testing and Estimation (4)

Electives (a minimum of 16 units)

One of the following Groups 1 or 2 below:

Group 1

- Biol 370. Symbiosis (4)
- Biol 450. Ecology (5)

A minimum of seven units chosen from:

- Biol 319. Local Flora (5)
- Chem 221. Organic Chemistry I (4)
- Chem 222. Organic Chemistry II (4)
- Geog 460. Biogeography (4)

May choose only one of the following:

- Geog 103. Physical Geography (5)
- Geol 101. Physical Geology (5)
- Geol 300. Geochemistry (3)
- HSci 352. Environmental Health I (4)
- HSci 353. Environmental Health II (5)

Group 2

- Chem 221. Organic Chemistry I (4)
- Chem 222. Organic Chemistry II (4)

A minimum of eight units chosen from:

- Biol 319. Local Flora (5)
- Biol 370. Symbiosis (4)
- Biol 450. Ecology (5)
- Geog 460. Biogeography (4)

May choose only one of the following:

- Geog 103. Physical Geography (5)
- Geol 101. Physical Geology (5)
- Geol 300. Geochemistry (3)
- HSci 352. Environmental Health I (4)
- HSci 353. Environmental Health II (5)

Optional courses not a part of the major: Students are encouraged to continue their studies of the environment through the use of independent study courses and approved internships.

HONORS IN THE MAJOR

Students majoring in environmental studies are eligible to receive honors in environmental studies at graduation if the following conditions are met:

1. At least one-half of the course work required by the major is completed at this university;
2. At least a 3.5 GPA in the major, both at this university and overall;
3. An overall undergraduate GPA of 3.0 ("B") or better;
4. Completion of a senior project approved in advance by the program coordinator.

Students interested in receiving this recognition must initiate the process by making a formal application with the Geography Department secretary.

ETHNIC STUDIES

School of Social and Behavioral Sciences

Pfau Library, Room 236
880-5476

Minor

Ethnic Studies
General Ethnic Studies
African American Studies
Latino Studies
Native American Studies
Asian American Studies

DIRECTOR: Brij Khare

Ethnicity is an interdisciplinary study of American nationality and race, and utilizes knowledge from the humanities and social sciences to explore issues and experiences. Faculty teaching in the program represent the wide diversity of these disciplines. Essentially, Ethnic Studies is part of American studies rather than regional, area or international studies. The study of American ethnicity and race is designed to enhance the understanding of a multicultural and multiracial society.

The Center for Ethnic Studies oversees the program including academic advising and mentoring of students. Collaborative efforts between students and faculty may result in research proposals, data compilation, joint professional papers for academic conferences, and joint publications.

Jointly governed by the School of Social and Behavioral Sciences and the School of Humanities, the Center's director works closely with an Advisory Council whose members are drawn from the faculty of every school as well as students and staff.

Minor in Ethnic Studies Requirements (28 units)

To earn the minor in ethnic studies, students must complete 28 units of coursework with options in:

General Ethnic Studies
African American Studies
Latino Studies
Native American Studies
Asian American Studies

Requirements for a minor in Ethnic Studies

Core Courses (8 units)

1. ES 100. Ethnicity and Race in America (4)
2. ES 300. Research Methods in Ethnic Studies (4)

Topic Courses (4 units)

In consultation with an advisor from the Ethnic Studies Program Committee, *four units chosen from:*

- ES 392. Topics in Ethnic Studies (2) for a total of (4)
ES 394. Topics in Ethnic Studies (4)

One of the following options:

General Ethnic Studies

In consultation with an advisor from the Ethnic Studies Program Committee, *16 units chosen from:*

American Studies (at least 8 units chosen from the following):

- Anth 351. Indians of North America (4)
Anth 352. Indians of the Southwest (4)

May choose only one of the following:

- Anth 323. Native North American Art (4)
Art 323. Native North American Art (4)
Eng 314. American Indian Literature (4)
Eng 339. African American Literature (4)
Eng 323. Chicano Literature (4)
Hist 331. Black History I: The African Experience (4)
Hist 334. Black History II: The American Experience (4)
Hist 565. Ethnic Minorities in American History (4)
Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
Hist 567. The Asian-American Experience (4)
Hum 335. The Origin and Contemporary Role of Latino Culture (4)
Mus 352. Afro-American Music (4)
PSci 352A. Minority Politics: Ethnic Politics (4)
Soc 336. Black Women and Feminism (4)
Soc 341. Marriage and Family Among Blacks (4)
Soc 342. The Chicano Family (4)
Soc 441. Black Social Stratification (4)
Soc 442. Chicano Social Stratification (4)
TA 462. Afro-American Theatre and Drama (4)

Area Studies (no more than 8 units chosen from the following)

- Anth 325. Human Variation and the Concept of Race (4)
Anth 357. African Societies (4)
Art 328. Mexican Art (4)
Art 329. Chicano Art (4)
Econ 352. The Economics of Poverty and Discrimination (4)
Hist 391. Chicano History (4)
Hist 465. Modern Central America (4)
Hist 470. Modern Latin America (4)
Psyc 340. Prejudice, Race and Racism (4)
SSci 300. Nonwestern World (4)
SSci 316. Race and Racism (4)
SSci 350. Roots of Modern Racism in America (4)
Soc 410. Racial and Cultural Minorities (4)

African American Studies

In consultation with an advisor from the Ethnic Studies Program Committee, *16 units chosen from:*

- Anth 357. African Societies (4)
- Eng 339. African American Literature (4)
- Hist 334. Black History II: The American Experience (4)
- Hist 565. Ethnic Minorities in American History (4)
- Mus 352. Afro-American Music (4)
- PSci 352B. Minority Politics: African American Politics (4)
- Soc 336. Black Women and Feminism (4)
- Soc 341. Marriage and Family Among Blacks (4)
- Soc 441. Black Social Stratification (4)
- TA 462. Afro-American Theatre and Drama (4)

Latino Studies

In consultation with an advisor from the Ethnic Studies Program Committee, *16 units chosen from:*

- Art 328. Mexican Art (4)
- Art 329. Chicano Art (4)
- Eng 323. Chicano Literature (4)
- Hist 391. Chicano History (4)
- Hist 465. Modern Central America (4)
- Hist 470. Modern Latin America (4)
- Hist 565. Ethnic Minorities in American History (4)
- Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
- Hum 335. The Origin and Contemporary Role of Latino Culture (4)
- IS 460. Aspects of Chicano Culture (4)
- PSci 352C. Minority Politics: Latino Politics (4)
- Soc 342. The Chicano Family (4)
- Soc 442. Chicano Social Stratification (4)

Native American Studies

In consultation with an advisor from the Ethnic Studies Program Committee, *16 units chosen from:*

- Anth 305. North American Prehistory (4)
- Anth 351. Indians of North America (4)
- Anth 352. Indians of the Southwest (4)
- Art 323. Native North American Art (4)
- Hist 565. Ethnic Minorities in American History (4)
- Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
- Eng 314. American Indian Literature (4)
- PSci 352E. Minority Politics: Native American Politics (4)

Asian American Studies

1. Hist 567. The Asian-American Experience (4)
2. PSci 352D. Minority Politics: Asian American Politics (4)
3. In consultation with an advisor from the Ethnic Studies Program Committee, *8 units chosen from:*
 - Art 310. Eastern Art History (4)
 - Art 317A. Topics in Far Eastern Art: India (4)
 - Art 317B. Topics in Far Eastern Art: China (4)
 - Art 317C. Topics in Far Eastern Art: Japan (4)
 - Phil 350. Classics of Eastern Thought (4)

- Hist 565. Ethnic Minorities in America (4)
- Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)

COURSE OFFERINGS IN ETHNIC STUDIES (ES)

Lower Division**100. Ethnicity and Race in America**

Culture, history and politics, and current problems of ethnic and racial minorities. Major groups included will be Black, Chicano, Asian American, and Native American. (4 units)

Upper Division**300. Research Methods in Ethnic Studies**

Development and implementation of research (quantitative or qualitative) that explores in depth one or more facets of ethnic experience. (4 units)

392. Topics in Ethnic Studies

A selected area or issue of ethnic studies. May be repeated for credit as topics change. (2 units)

394. Topics in Ethnic Studies

A selected area or issue of ethnic studies. May be repeated for credit as topics change. (4 units)

595. Independent Study

For students capable of individualized work and in need of advanced or specialized study. May be repeated for credit in the Ethnic Studies minor for a total of no more than eight units. *Prerequisites: consent of instructor and Ethnic Studies Program Committee approval.* (Credit to be arranged: 1 to 4 units)

FINANCE

Department of Accounting and Finance

Jack Brown Hall, Room 459
880-5704

FACULTY: Gene Andrusco, Francisca Beer, Rauf Khan, Dong Man Kim, David Schalow, Ken Thygerson, Mo Vaziri

The university offers concentrations in finance within the Bachelor of Arts in Administration, the Bachelor of Science in Administration and the Master of Business Administration. A Certificate in Financial Management is also available. The details of these programs are listed under Administration on Page 75. The Master of Business Administration can be found on Page 330. The courses listed below are offered in support of these programs. Further information is available from the Department of Accounting and Finance.

COURSE OFFERINGS IN FINANCE (Fin)

Upper Division

Enrollment in upper-division courses restricted to students who have met all prerequisites and have completed at least 89.9 quarter units (junior class level). Students who do not meet these requirements will be disenrolled.

313. Business Finance

Basic principles of financial analysis for management. Techniques of financial decision-making for liquidity management, financial forecasting, dividend policy and selection of sources of capital. A self-paced version of this course (Finance 313S) is also available. (Students may not receive credit for both.) *Prerequisites:* Accounting 212 or 312, Management Science 210 and Mathematics 110. (4 units)

314. Corporate Financial Management

An advanced study of internal business financial policies and decisions. Includes: capital budgeting, sources and forms of long-term financing, financial structure, cost of capital, equity management, and mergers and acquisitions. *Prerequisite:* Finance 313. (4 units)

360. Risk Management and Insurance

The theoretical and institutional framework of risk management and insurance. Identification and evaluation of personnel, liability, and property risks facing business, nonprofit organizations, government, individuals and families. Selecting and implementing the best combinations of tools/methods, including retention, loss control and insurance, for handling pure risks. *Prerequisites:* Accounting 211, 212 and Finance 313. (4 units)

380. Principles of Real Estate

Basic issues in real estate, including legal concepts, appraisal, financing, investment, brokerage, and management of real estate. This class also contributes toward the state requirements for pre-license education. Formerly Finance 580. *Prerequisite:* Finance 313 or consent of instructor. (4 units)

430. Financial Theory and Practice

Financial management with application to capital markets, financial planning, capital budgeting, capital structure, portfolio selection and managerial problems. *Prerequisites:* Finance 313 and 314. (4 units)

432. Financial Institutions and Capital Formation

Structure, operations, portfolio compositions and problems of financial intermediaries and markets. *Prerequisites:* Finance 313 and 314. (4 units)

433. International Business Finance

Financial operations of multinational businesses with emphasis on foreign exchange mechanics, funds transmission, financing instruments, institutions and markets, capital investment decisions and special problems facing a firm in this unique environment. *Prerequisite:* Finance 313. (4 units)

434. Export-Import Financing

International complexities of financing worldwide business. Emphasis on sources of domestic financing, international lending agencies, markets, insurance guarantee programs, international banking and development banks. Problems of income and dividend repatriation and taxation. *Prerequisite:* Finance 313. (4 units)

435. Investment Analysis

Analysis and forecasting of security markets, industry studies, portfolio construction. *Prerequisites:* Finance 313, 314 and 430. (4 units)

445. Financial Analysis and Decision-Making

Decision-making in financial management. Advanced financial applications and analysis, including reporting and presentations. Students are advised to take this course near the end of their program. *Prerequisite:* Finance 430. (4 units)

480. Real Estate Appraisal

Examines the appropriate methodology for determining the value of real estate, including both theory and practice. A foundation for potential licensing and certification will be developed. Meets requirement for California Broker Credit. *Prerequisite:* Finance 313. (4 units)

503. Financial Management Concepts

An introductory course in financial management with an emphasis on concepts, tools and strategies underlying corporate financial decision-making. Topics include techniques used by firms in procuring and allocating capital for short-term and long-term operations. No credit will be awarded to students who have had Finance 313 and 314. May not be counted toward fulfilling requirements for any degree program offered by the School of Business and Public Administration. *Prerequisites:* Accounting 503 and achievement of the GMAT formula score of 1020. (4 units)

575. Internship in Finance

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

585. Real Estate Finance

Financial aspects of real estate investment will be discussed, including analysis of investment characteristics, lending environment, financial instruments, and effective loan proposals. *Prerequisite: Finance 313 or consent of instructor.* (4 units)

590. Seminar in Finance

An intensive study of some phase of finance to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

FOODS AND NUTRITION

Approved as a Didactic Program in Dietetics, Plan V, by the American Dietetic Association

Department of Health Science and Human Ecology

Health and Physical Education Building, Room 235
880-5340

Bachelor of Science

Foods and Nutrition

Minor

Foods and Nutrition

FACULTY: Dorothy Chen (Coordinator), Vijay Gangi

The Bachelor of Science in Foods and Nutrition is appropriate for students preparing for careers dealing with foods, nutrition or dietetics. Students are prepared for entry-level internship positions in institutional dietetics, public health nutrition and private enterprise. In addition, students are prepared for entry to graduate schools.

B.S. IN FOODS AND NUTRITION

Requirements (113 units)

Requirements for the B.S. in Foods and Nutrition:

Note: Certain required courses also apply in the university's general education program (refer to Page 57).

Lower-division requirements (51 units)

1. Biol 220. Principles of Microbiology (5)
2. Biol 223. Human Physiology and Anatomy I (5)
3. Biol 224. Human Physiology and Anatomy II (5)
4. Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
5. Chem 206. Fundamentals of Chemistry II: Organic Chemistry (5)
6. Chem 207. Fundamentals of Chemistry III: Biochemistry (5)
7. CSci 123. Using Computer Software (2)
8. *Four units chosen from:*
 - Econ 104. Economics of Social Issues (4)
 - Econ 200. Principles of Microeconomics (4)
 - Econ 202. Principles of Macroeconomics (4)
9. HSci 120. Health and Society: An Ecological Approach (5)
10. HSci 225. The Dietetic Profession (1)
11. HSci 245. Foods (5)
12. Psyc 100. Introduction to Psychology (4)

Upper-division requirements (62 units)

1. HSci 301. Principles of Health Education for Health Educators (4)
2. HSci 345. Food Science (5)
3. HSci 362. Principles of Nutrition (4)
4. HSci 365. Nutrition Throughout the Life Cycle (4)
5. HSci 368. Diet and Disease I (4)
6. HSci 369. Diet and Disease II (4)
7. HSci 445. Community Nutrition (4)
8. HSci 447. Advanced Nutrition (4)
9. HSci 465. Food Service Production Management (5)
10. HSci 466. Food Service Procurement (4)
11. HSci 467. Food Service Systems Management (4)
12. *Four units chosen from:*
 - Mgmt 302. Management and Organizational Behavior (4)
 - Psyc 302. Management and Organizational Behavior (4)
13. Math 305. Statistics: Hypothesis Testing and Estimation (4)
14. NSci 495. Expository Writing for the Natural Sciences (4)
15. Four units of an upper-division health science course.

MINOR IN FOODS AND NUTRITION

Requirements (40 units)

Requirements for a minor in Foods and Nutrition:

Lower-division requirements (20 units)

1. Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
2. Chem 206. Fundamentals of Chemistry II: Organic Chemistry (5)
3. Chem 207. Fundamentals of Chemistry III: Biochemistry (5)
4. HSci 245. Foods (5)

Upper-division requirements (20 units)

1. HSci 362. Principles of Nutrition (4)
2. Sixteen units of upper-division foods and nutrition courses to be chosen in consultation with an advisor.

FOREIGN LANGUAGES AND LITERATURES

Department of Foreign Languages

University Hall, Room 314
880-5847

FACULTY: Jacques Benzakein (Chair), Ruth Burke, Rafael Correa, M. Antoinetta Gallegos-Ruiz, Mirta Gonzalez, Jorun Johns, Dominique Louisor, Donna McMahon, Walter Oliver, Daniel Whitaker, Aurora Wolfgang

The Department of Foreign Languages offers a wide variety of courses both in the foreign languages and in English. The foreign languages include French, German and Spanish. The offerings of each language can be found separately listed in alphabetical order within the curriculum section of this catalog. Courses that apply comprehensively to all languages, including English, appear below.

The principal objectives of the department's programs are to teach students to understand, speak, read and write the foreign languages offered; and to promote an understanding of foreign civilizations and an appreciation of their literatures. This background will prepare students to teach foreign languages and will provide language skills for those interested in positions such as librarian, interpreter, translator, foreign service officer and foreign trade specialist.

COURSE OFFERINGS IN FOREIGN LANGUAGES AND LITERATURES (FLan)

Lower Division

100. English as a Second Language

Self-paced course designed to help students gain mastery of the English language at beginning, intermediate and advanced levels. No more than 10 units are applicable to a baccalaureate degree. Open only to foreign students for whom English is a second language. *Prerequisite:* consent of instructor. (4 units)

101. Independent Language Study I

Introduction to a language not offered as a major or minor. Fundamentals of pronunciation, structure and culture designed to develop the ability to use and understand the chosen language. May be repeated for credit as topics change. (4 units)

102. Independent Language Study II

Further study in a language not offered as a major or minor. Fundamentals of pronunciation, structure and culture designed to develop the ability to use and understand the chosen language. May be repeated for credit as topics change. *Prerequisite:* Foreign Languages 101 in the chosen language. (4 units)

150. Independent Intermediate Language Study

Intermediate study in a language not offered as a major or minor. Emphasis on oral and written competency at the intermediate level in a cultural context. May be repeated for credit as topics change. *Prerequisite:* two years of high school study in the chosen language or equivalent. (4 units)

Upper Division

320. Masterpieces of Literature

Selected masterpieces and authors from Western Europe and Latin America. Course taught entirely in English. No foreign language prerequisite. May be repeated for credit as topics change. (4 units)

555. Independent Study

Independent study of individual writers and genres. *Prerequisites:* one 300-level course in the language under study or consent of instructor, a minimum overall grade point average of 3.0, departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken. (4 units)

FRENCH

Department of Foreign Languages

University Hall, Room 314
880-5847

Bachelor of Arts

French

Teaching Credential Program

French

Minor

French

Certificate Program

French/English and English/French Translators

The study of French combines training in foreign studies with language, literature and culture. These studies contribute to the basis of any program of liberal education, affording insight into foreign attitudes and methods and permitting free communication, written and oral, among people.

In addition to the traditional preparation of teachers in the subject, a major in French can provide a good background for advanced professional or business programs, especially when combined with an appropriate second major.

Attention is drawn to other courses which may be of interest to French majors:

1. FLan 320. Masterpieces of Literature
2. FLan 555. Independent Study
3. Hum 380. Comparative Studies in the Arts and Literature of Western and Non-Western Cultures
4. Hum 460. Cultural Studies
5. Hum 499. Methods and Materials in the Teaching of Humanities

B.A. IN FRENCH

Requirements (60 units)

Requirements for the B.A. in French:

Proficiency in French equal to that of French 150.
Intermediate French or equivalent.

Lower-division requirements (12 units)

1. Fren 212. Composition (4)
2. Fren 214. Conversation (4)
3. Fren 216. Introduction to Literary Texts (4)

Upper-division requirements (48 units)

1. Fren 302. Advanced French Composition (4)
2. Fren 306. French Linguistics (4)
3. Fren 311. Masterpieces of French Literature I (4)
4. Fren 312. Masterpieces of French Literature II (4)
5. Fren 313. Masterpieces of French Literature III (4)

6. Fren 314. Masterpieces of French Literature IV (4)
7. Fren 460. French Culture Studies (4)
8. *Twenty units chosen from:*
 - Fren 309A. French for Translators: General Translation (4)
 - Fren 309B. French for Translators: Commercial Translation (4)
 - Fren 309C. French for Translators: Technical Translation (4)
 - Fren 340. Advanced Conversation (2) for a total of (4)
 - Fren 420. Special Topics in French Literature (4)
 - Fren 514. Seminar in French Language, Literature or Civilization (4)

TEACHING CREDENTIAL PROGRAM

The Bachelor of Arts in French is an approved single subject teaching credential program in foreign language. In order to be recommended for the teaching credential, students must complete the Bachelor of Arts in French and certain prerequisites to the teacher education program. For information about the professional education component, admission to the teacher education program or specific requirements of the single subject waiver program, see Page 146 or contact the School of Education C.A.S.E.-Credentials Office.

MINOR IN FRENCH

Requirements (32 units)

Requirements for a minor in French:

Proficiency in French equal to that of French 150.
Intermediate French or equivalent.

Lower-division requirements (12 units)

1. Fren 212. Composition (4)
2. Fren 214. Conversation (4)
3. Fren 216. Introduction to Literary Texts (4)

Upper-division requirements (20 units)

1. Fren 302. Advanced French Composition (4)
2. Fren 306. French Linguistics (4)
3. Fren 460. French Culture Studies (4)
4. Eight additional units from any upper-division French courses.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the

range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate for French/English and English/French Translators

Certificate Requirements (28 units)

Proficiency in French equal to French 150. Intermediate French or equivalent and completion of the following courses with a GPA of 2.7 ("B-") or better.

Note: Entering students with previous training in French and those who are native speakers should contact the Department of Foreign Languages for information about advanced placement and credit by examination.

Lower-division requirement (4 units)

1. Fren 212. Composition (4)

Upper-division requirements (24 units)

1. Fren 302. Advanced French Composition (4)
2. Fren 309A. French for Translators: General Translation (4)
3. Fren 309B. French for Translators: Commercial Translation (4)
4. Fren 309C. French for Translators: Technical Translation (4)
5. Fren 460. French Culture Studies (4)
6. *Four units chosen from:*
 - Educ 495. Expository Writing for Education (4)
 - Eng 495. Expository Writing (4)
 - Hum 495. Expository Writing for the Humanities (4)
 - Mgmt 495. Expository Writing for Administration (4)
 - NSci 495. Expository Writing for the Natural Sciences (4)
 - SSci 495. Expository Writing for the Social Sciences (4)

COURSE OFFERINGS IN FRENCH (Fren)

Lower Division

Courses at the 101, 102 and 150 levels require one hour each week in the language laboratory in addition to the regularly scheduled classroom hours. These courses are offered in a self-paced format as well as a traditional format.

101. College French I

Fundamentals of pronunciation, structure and French culture designed to develop the ability to use and understand basic spoken French. A self-paced version of this course (French 101S) is also available. Students may not receive credit for both. (4 units)

102. College French II

Further study of the fundamentals of pronunciation, structure and French culture designed to develop the ability to use and understand basic spoken French. Continuation of French 101. A self-paced version of this course (French 102S) is also available. Students may not receive credit for both. (4 units)

150. Intermediate French

Emphasis on oral and written competency at the intermediate level in a cultural context. A self-paced version of this course (French 151) is also available. Students may not receive credit for both. *Prerequisite:* two years of high school French or equivalent. (4 units)

212. Composition

Comprehensive review of the principles of French grammar, emphasizing their application to composition. Formerly French 104. *Prerequisite:* French 150 or equivalent. (4 units)

214. Conversation

Practice of oral French stressing the discussion of current topics, panel discussions, debates, short talks and skits. Formerly French 200. *Prerequisite:* French 150 or equivalent. (4 units)

216. Introduction to Literary Texts

Techniques of literary study and analysis. Vocabulary development. Formerly French 210. *Prerequisite:* French 150 or equivalent. (4 units)

290. French Literature in English

Introduction to French literature read in English translation. (4 units)

Upper Division

Ordinarily, upper-division courses are conducted in French. Students enrolled in these courses will be evaluated on appropriate progress in both the command of the language and the subject matter.

302. Advanced French Composition

Structure of the French language, with emphasis on improvement of the student's ability to write French. *Prerequisite:* French 212 or equivalent. (4 units)

306. French Linguistics

French phonology, morphology and syntax. *Prerequisite:* French 214 or equivalent. (4 units)

309. French for Translators

Extensive practice in precise written translations from French into English and from English into French. Self-paced course. May be repeated for credit as topics change. *Prerequisite:* French 212 or equivalent.

- A. General Translation (4 units)
- B. Commercial Translation (4 units)
- C. Technical Translation (4 units)

311. Masterpieces of French Literature I

Readings in French literature from the Middle Ages through the sixteenth century. *Prerequisite: French 216 or equivalent.* (4 units)

312. Masterpieces of French Literature II

Readings in seventeenth and eighteenth century French literature. *Prerequisite: French 216 or equivalent.* (4 units)

313. Masterpieces of French Literature III

Readings in nineteenth century French literature. *Prerequisite: French 216 or equivalent.* (4 units)

314. Masterpieces of French Literature IV

Readings in twentieth century French literature. *Prerequisite: French 216 or equivalent.* (4 units)

340. Advanced Conversation

Advanced practice of oral French stressing the reading and discussion of current topics in France. A maximum of 4 units may be applied toward the major. *Prerequisite: French 214 or consent of instructor.* (2 units)

399. Community Service Project

Credit for performing academically related tasks in such agencies as governmental, social service and educational institutions. May be repeated for a total of six units. No more than six units of credit for Community Service Project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisite: consent of department.* (Credit to be arranged: 1 or 2 units)

420. Special Topics in French Literature

Critical examination of selected works in French literature. Emphasis on the novel, drama, poetry and the essay. May be repeated for credit as topics change. *Prerequisites: two 300-level courses in French literature or equivalent.* (4 units)

460. French Culture Studies

Aspects of culture and civilization with emphasis on major factors shaping national tradition. *Prerequisite: French 212 or 214 or equivalent.* (4 units)

514. Seminar in French Language, Literature or Civilization

Advanced study of a single author, a literary movement, linguistics or civilization. May be repeated for credit as topics change. *Prerequisite: one 400-level French course.* (4 units)

GEOGRAPHY

Department of Geography

Faculty Office Building, Room 249
880-5519

Bachelor of Arts

Geography - Track A
Geography - Track B

Minor

Geography

Master of Urban Planning

(Degree requirements can be found on Page 427.)

Certificate Program

Urban Planning

FACULTY: Jeffrey Hackel, Ted McDowell (Chair),
Norman Meek, James Mulvihill, Richard Rowland,
Jenny Zorn

Geography is concerned with the spatial variations and interrelations of the natural and cultural features of the earth. Geographers study the earth primarily as the home of human beings. As an approach to knowledge, geography forms an interdisciplinary bridge between the physical and cultural worlds, examining both humans and their environment. As a synthesizing discipline, geography is an especially attractive major for liberal arts and science students. Its body of theory and methodologies provides an analytic technique applicable to a wide range of questions. For students planning to terminate their formal education with a bachelor's degree, it also provides both the regional and world perspective required of responsible citizens. For the same reasons, geography is especially valuable for those who plan to do graduate work. Geography offers job opportunities in teaching, business, government, armed forces, conservation and water resources, planning and market research, and international organizations.

Students who can meet the qualifications are also encouraged to participate in the California State University's International Programs. Such participation will not only contribute immediately to the student's geographical knowledge and degree program, but may have longer-term educational and career benefits as well. For further information, see Page 22.

B.A. IN GEOGRAPHY - TRACK A

Requirements (55 units)

Requirements for the B.A. in Geography - Track A:

Lower-division requirements (9 units)

1. Geog 100. Introduction to Human Geography (4)
2. Geog 103. Physical Geography (5)

Upper-division requirements (46 units)

1. Geog 300. Map Interpretation (2)
2. Geog 380. Population Geography (4)
3. Geog 420. Geography of Economic Activity (4)
4. *Eight units chosen from:*
 - Geog 301. Cartography (4)
 - Geog 304. Field Methods in Geography (4)
 - Geog 305. Geographic Research Methods (4)
 - Geog 306. Remote Sensing of Environment (4)
5. *Four units chosen from:*
 - Geog 309. Area Study: Former and Post-Soviet Union (4)
 - Geog 310. Area Study: Africa (4)
 - Geog 321. Area Study: Latin America (4)
 - Geog 323. Area Study: North America (4)
6. *Eight units chosen from:*
 - Geog 360. Climate and Vegetation (4)
 - Geog 460. Biogeography (4)
 - Geog 470. Hydrology and Water Resources (4)
 - Geog 480. Geomorphology (4)
7. Sixteen units of upper-division course work in geography chosen in consultation with a departmental advisor. Only four of these units may be drawn from the area studies group.

B.A. IN GEOGRAPHY - TRACK B

Requirements (55 units)

Requirements for the B.A. in Geography - Track B:

Lower-division requirements (9 units)

1. Geog 100. Introduction to Human Geography (4)
2. Geog 103. Physical Geography (5)

Upper-division requirements (46 units)

1. Geog 300. Map Interpretation (2)
2. Geog 380. Population Geography (4)
3. Geog 420. Geography of Economic Activity (4)
4. *Eight units chosen from:*
 - Geog 301. Cartography (4)
 - Geog 304. Field Methods in Geography (4)
 - Geog 305. Geographic Research Methods (4)
 - Geog 306. Remote Sensing of Environment (4)
5. *Four units chosen from:*
 - Geog 309. Area Study: Former and Post-Soviet Union (4)
 - Geog 310. Area Study: Africa (4)
 - Geog 321. Area Study: Latin America (4)
 - Geog 323. Area Study: North America (4)
6. *Eight units chosen from:*
 - Geog 360. Climate and Vegetation (4)
 - Geog 460. Biogeography (4)
 - Geog 470. Hydrology and Water Resources (4)
 - Geog 480. Geomorphology (4)
7. Sixteen units of upper-division course work in geography and/or related disciplines to be chosen in consultation with a departmental advisor. Only four of these units may be drawn from the area studies group.

MINOR IN GEOGRAPHY

Requirements (33 units)

Requirements for a minor in Geography:

Lower-division requirements (9 units)

1. Geog 100. Introduction to Human Geography (4)
2. Geog 103. Physical Geography (5)

Upper-division requirements (24 units)

1. Geog 420. Geography of Economic Activity (4)
2. Twenty units chosen from any upper-division Geography courses chosen in consultation with a departmental advisor. Only four of these units may be drawn from the area studies group.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Refer to Page 66 for additional certificate information.

Certificate in Urban Planning

Certificate Requirements (24 units)

1. Geog 301. Cartography (4)
2. Geog 306. Remote Sensing of Environment (4)
3. *Four units chosen from:*
 - Geog 350. Conservation and Natural Resources (4)
 - Econ 360. Economics of the Environment (4)
4. Geog 415. Urban Planning and Land Development (4)
5. Geog 440. Understanding the City (4)
6. *Four units chosen from:*
 - Anth 493. Urban Anthropology (4)
 - Geog 575. Internship in Geography (4)
 - HSci 478. Environmental Health Management (4)
 - PA 521. Principles of Planning (4)
 - Soc 420. Population and Social Ecology (4)
 - Soc 430. Urban Sociology (4)

COURSE OFFERINGS IN GEOGRAPHY (Geog)

Lower Division

100. Introduction to Human Geography

Introduction to the geographic study of human activities throughout the world. (CAN GEOG 4) (4 units)

103. Physical Geography

Systematic approach to the physical environment of man stressing the relationships between the atmosphere, land, life forms and water. Four hours lecture and three hours laboratory. *Prerequisite: satisfactory score on the entry level mathematics examination.* (5 units)

Upper Division

300. Map Interpretation

Basic introduction to skills and reasoning ability needed to appreciate and use maps as professional tools and as illustrative devices. (2 units)

301. Cartography

Provides the necessary drafting skills to construct maps, charts and graphs. Three hours lecture and three hours laboratory. *Prerequisite: Geography 300 or consent of instructor.* (4 units)

302. Geography of California

Systematic and regional study of California geography stressing general geographical concepts to explain sequential human settlement patterns in relation to the natural environment. (4 units)

303. Computer Cartography

An introduction to the use of computers and related devices in map design. An emphasis is placed on microcomputer applications. Three hours lecture and two hours laboratory. *Prerequisites: Geography 300 and 301 or consent of instructor.* (4 units)

304. Field Methods in Geography

Introduction to methods and techniques for the acquisition of geographic data from direct field measurement and observations. One hour lecture and six hours field activity. *Prerequisites: Geography 103 and 300.* (4 units)

305. Geographic Research Methods

Quantitative methods in geography including computer applications and the writing of geographic research reports. (4 units)

306. Remote Sensing of Environment

Interpretation of environmental phenomena recorded by satellite and aerial multispectral sensing systems, especially conventional aerial photography. *Prerequisite: Geography 103 or consent of instructor.* (4 units)

309. Area Study: Former and Post-Soviet Union

Regional analysis of socio-economic development and environmental problems. (4 units)

310. Area Study: Africa

Regional analysis of socio-economic development and environmental problems. (4 units)

321. Area Study: Latin America

Regional analysis of socio-economic development and environmental problems. (4 units)

323. Area Study: North America

Systematic examination of the physical and cultural geography of North America, stressing the relationships between the natural environment and human settlement and economic patterns. (4 units)

330. The Geography of Gender

Spatial analysis of social, political, and economic factors associated with gender relations and demographic patterns in the United States. An exploration of the causes of regional and spatial variations in gender patterns. (4 units)

340. Political Geography

An examination of contemporary problems in the spatial patterns of political processes at the international, interregional and urban scales. (4 units)

350. Conservation and Natural Resources

Principles of resource utilization and ecology as they involve human development and politico-economic policy. (4 units)

360. Climate and Vegetation

Climate and vegetation, and the interrelationships between the two including the consideration of atmospheric processes significant for understanding regional patterns of distribution. *Prerequisite: Geography 103 or consent of instructor.* (4 units)

380. Population Geography

Spatial distribution and redistribution of population; interrelationships between population and the environment, including techniques of analysis. (4 units)

390. Selected Topics in Geography

Examination of selected topics of current interest in geography. May be repeated for credit as topics change. (4 units)

392. Selected Topics in Geography

Examination of selected topics of current interest in geography. May be repeated for credit as topics change. (2 units)

415. Urban Planning and Land Development

Comprehensive urban planning and land use controls. Emphasis on impact of urban development in North America. (4 units)

420. Geography of Economic Activity

Analysis of concepts of location, interaction and regionalization as they apply to economic activity. Special emphasis on economic growth and modernization. (4 units)

440. Understanding the City

A study of the physical and social attributes of the North American city. Emphasis is placed on urban planning and policy making. (4 units)

460. Biogeography

Investigation of plants and animals according to their environmental and spatial relationships. Biogeographic theory and regions will be examined; agents of biotic distribution and human influences will be noted. *Prerequisites: upper-division standing, Geography 103, and Biology 201 or 202; or consent of instructor.* (4 units)

470. Hydrology and Water Resources

Basic principles of hydrology: relationships between atmospheric, surface and groundwater phenomena; streamflow and flood prediction; water supply and quality. *Prerequisite: Geography 103 or consent of instructor.* (4 units)

480. Geomorphology

Landforms and the processes that create them. Multi-day field trip required. *Prerequisite: Geography 103 or Geology 101 or consent of instructor.* (4 units)

575. Internship in Geography

Supervised work in public or private organizations emphasizing practical applications of geographic concepts. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and department.* (5 units)

595. Independent Study

A total of eight units in Geography 595 may be applied toward the major and graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Proseminar in Geography

Survey of the concepts and ideas that geographers study, how they approach the study of geographical phenomena, and what methods they employ in their analysis. The seminar will include discussion of the relationships of the discipline to other social science disciplines and the unique contributions geography has made to knowledge in general and in the social sciences. *Prerequisite: consent of instructor.* (4 units)

605. Spatial Data Presentation

An integrated study of geographic techniques used in land use planning, including: computer graphics, geographic information systems, and remote sensing. Three hours lecture and two hours laboratory. (4 units)

609. Seminar in the Geography of the Former and Post-Soviet Union

A geographic perspective of the former and post-Soviet Union, including such topics as population, economic development, environment and foreign relations. (4 units)

615. Foundations of Planning I

An intensive study of the social and ethical bases of urban planning, and the fundamental skills and understanding needed by urban planners. The course will include an overview of the legal, economic and political bases of urban planning. (4 units)

616. Foundations of Planning II

Standards and issues associated with the development of general planning, zoning ordinances, and land subdivision are examined. (4 units)

617. Planning Within the Local Power Structure

Examination of the interrelationships between local urban power structures and modes of decision-making and planning, with the purpose to explore ways in which the professional urban planner can work effectively. (4 units)

621. Seminar in the Geography of Latin America

A geographic perspective of Latin America, including such topics as population, economic development, environment and foreign relations. (4 units)

650. Environmental Issues of Land Management

Study of multiple-use management of non-urban land by local government. Emphasis will be placed on recreation, mining, and the maintenance of open space, biotic habitat, and air and water quality. The California Environmental Quality Act (CEQA) and related issues will also be addressed. (4 units)

680. Advanced Demographic Analysis

Advanced study of demographic techniques with particular emphasis on those relevant to urban planning. An examination of various data sources is included. (4 units)

695. Planning Colloquium

Discussion of the application of planning techniques in public and private agencies. A maximum of six units may be applied toward the Master in Urban Planning.

- A. Strategic Planning and Project Management (2 units)
- B. Negotiation in Planning (2 units)
- C. Subdivision Review and Site Design (2 units)
- D. Urban Design and Open Space (2 units)
- E. Neighborhood Planning (2 units)
- F. Urban Housing and Community Development (2 units)
- G. Urban Planning Law (2 units)
- H. Urban Transportation Planning (2 units)
- I. Regional Issues of Urban Planning (2 units)

697. Project Proposal Development

A study of research design required in developing a culminating research project proposal including study of research methodologies relevant to the research project. (4 units)

698. Research Project in Urban Planning

Research applying methods of planning. Graded credit/no credit. *Prerequisite: Geography 697.* (4 units)

GEOLOGY

Department of Geological Sciences

Biological Science Building, Room 111
880-5336

Bachelor of Science

Geology

FACULTY: Bonnie Brunkhorst, Louis A. Fernandez,
Joan E. Fryxell, W. Britt Leatham, Sally F. McGill,
James M. Mehegan (Chair)

The study of geology is twofold: 1) geologists attempt to understand the physical and biological processes that affect and are recorded in rocks, minerals, and earth materials; and 2) geologists use that information to decipher the development of our planet. Much of the information geologists use is obtained by careful, systematic field work, which is an inherent requirement for geological studies.

Geology is a broad science that integrates with other classical sciences and disciplines such as chemistry, physics, biology, mathematics, computer science, and geography. Coursework in those disciplines, integrated within a geological framework, provides students broad, marketable understanding.

A bachelor's degree in geology provides graduates with the necessary skills for employment in environmental and geotechnical firms, governmental agencies, some phases of the oil industry, mining and mineral resource, exploration and management, education, and other technical fields. The long-range career outlook for geologists seems good at the present. The B.S. degree will also provide students seriously considering geology as a career with the background necessary for graduate studies.

B.S. IN GEOLOGY

Requirements (116 units)

Requirements for the B.S. in Geology:

Lower-division requirements (51 units)

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
2. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
3. CSci 123. Using Computer Software (2)
4. Geol 101. Physical Geology (5)
5. Geol 250. Historical Geology (5)
6. Math 211. Basic Concepts of Calculus (4)
7. Math 212. Calculus II (4)
8. Math 262. Applied Statistics (4)
9. Phys 221. General Physics I (5)
10. Phys 222. General Physics II (5)
11. Phys 223. General Physics III (5)

Upper-division requirements (49 units)

1. Geol 300. Geochemistry (3)
2. Geol 315. Optical Mineralogy (2)
3. Geol 320. Mineralogy and Crystallography (5)
4. Geol 325. Igneous and Metamorphic Petrology (5)
5. Geol 330. Sedimentary Petrology (5)
6. Geol 340. Stratigraphy (5)
7. Geol 350. Paleontology (5)
8. Geol 360. Structural Geology (5)
9. Geol 370. Tectonics (4)
10. Geol 390. Field Camp (8)
11. Geol 395. Directed Studies (2)

Electives (16 units)

A minimum of four units from each of the four following groups:

Areal Field Studies

- Geol 310. Intermediate Field Studies (2) (May be repeated for credit as topics change.)

Regional Geology

- Geol 440. Geology of California (4)
Geol 450. Geology of North America (4)

Computer Drafting

- Geog 303. Computer Cartography (4)

Applied Geology

- Geog 306. Remote Sensing of Environment (4)
Geog 470. Hydrology and Water Resources (4)
Geol 460. Topics in Applied Geology (4)
Geol 470. Economic Geology and Mineral Resources (4)

COURSE OFFERINGS IN GEOLOGY (Geol)

Lower Division

101. Physical Geology (FWS)

An introduction to the study of the earth, particularly the structure, composition, distribution and modification of earth materials, and processes that shape the surface of the earth. Four hours lecture and three hours laboratory. Formerly Earth Science 101. *Prerequisite:* satisfactory score on the Entry Level Mathematics examination. (CAN GEOL 2) (5 units)

110. Elementary Field Studies

Introduction to field observations and their geologic interpretation of a selected region or locality. May be repeated for credit as topics change. May not be taken for credit toward fulfilling requirements in the Geology major. Graded credit/no credit. (2 units)

250. Historical Geology (F)

Study of the origin and evolution of the earth and its life forms as interpreted from the rock and fossil record. Four hours lecture and three hours laboratory. Formerly Earth Science 102. *Prerequisite:* Geology 101. (CAN GEOL 4) (5 units)

295. Special Projects in Geology (FWS)

Individual investigation, research, study or survey of selected problems. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 or 2 units)

Upper Division**300. Geochemistry (F-96)**

Distribution, migration, and reactions of chemical elements within the earth through space and time. Recommended as an elective for students of chemistry, environmental studies, and life sciences. Three hours lecture. *Prerequisite: Chemistry 205 or 215* Recommended: Geology 320. (3 units)

301. Geological Field Methods (S)

Field identification of igneous, sedimentary, and metamorphic rock units, sample collection, making rock descriptions, use of Brunton compass, pace and compass technique, topographic map reading, location determination, measuring geological features (e.g., strike and dip of bedding, lineation and foliation in metamorphic rocks), plotting geologic features on a topographic map, geologic symbol and notation conventions, topographic profile construction, geologic cross section construction and interpretation, geologic field note taking, and preparing geologic reports. Two hours lecture and six hours laboratory. (4 units)

304. Geology in the Classroom (FWS)

Basic concepts of geology as related to the elementary and middle school classroom. Hands-on analysis of geological materials and processes. Identification and classification of minerals, rocks, and fossils. Study of volcanoes and earthquakes. One hour lecture and three hours laboratory. Materials fee required. *Prerequisite: one college-level course in chemistry or physics.* (2 units)

305. Demonstration Laboratory in Geology

A demonstration laboratory exploring the basic principles of geology through individual student demonstrations. Three hours laboratory. *Prerequisite or corequisite: Geology 304.* (1 unit)

306. Oceanography for the Science Teacher (W)

Basic concepts of oceanography as these relate to the classroom including seawater chemistry, ocean circulation, waves, tides, shores and shoreline processes and evolution of the sea floor. One hour lecture and six hours laboratory/field studies. Material and field trip fee required. *Prerequisites: Chemistry 304 and 305 or Physics 304 and 305.* (3 units)

310. Intermediate Field Studies (FW)

Investigation of geologic features and their interpretation based on field observations of selected region or locality. May be repeated for credit as topics change. *Prerequisite: Geology 250.* (2 units)

315. Optical Mineralogy (F-96)

Theory and application of petrographic microscopy for the analysis and identification of minerals. One hour lecture and three hours laboratory. *Prerequisite: Chemistry 205 or 215.* Recommended: Geology 320. (2 units)

320. Mineralogy and Crystallography (S)

Introduction to crystal symmetry, crystallography, crystal chemistry, mineral classification, mineral genesis, physical and chemical properties of minerals, and laboratory identification of important ore and rock-forming minerals. Three hours lecture and six hours laboratory. Formerly Earth Science 320. *Prerequisite: Geology 101. Prerequisite or corequisite: Chemistry 215.* (5 units)

325. Igneous and Metamorphic Petrology (W-97)

Description and genesis of igneous and metamorphic rocks, their mineralogic and chemical composition, internal structure, and mode of occurrence. Three hours lecture and six hours laboratory. Three, one-day field trips required. Formerly Earth Science 325. *Prerequisite: Geology 320. Prerequisite or corequisite: Chemistry 216.* (5 units)

330. Sedimentary Petrology (W-96)

Study of sedimentary processes, depositional environments, and diagenesis, based on the interpretation and classification of sedimentary rocks. Four hours lecture and three hours laboratory. *Prerequisites: Geology 250 and 320.* (5 units)

340. Stratigraphy (S-96)

Principles of analysis, description, and interpretation of stratiform rock, including stratigraphic nomenclature, correlation, facies relationships, and paleoenvironmental reconstruction. Four hours lecture and three hours laboratory. *Prerequisite: Geology 330.* (5 units)

350. Paleontology (S-97)

Concepts of paleobiology exemplified by systematic study of important fossil groups. Four hours lecture and three hours laboratory. Formerly Earth Science 350. *Prerequisites: Geology 101 and Physics 221.* (5 units)

360. Structural Geology (W-96)

Mechanics and characteristics of rock deformation and analytical techniques for the solution of structural relationships. Four hours lecture and three hours laboratory. Formerly Earth Science 360. *Prerequisites: Geology 101 and Physics 221.* (5 units)

370. Tectonics (S-97)

Interpretation of the geological evidence for plate tectonics; the mechanisms that control it; the structures it produces; its control on igneous, metamorphic, sedimentologic, and biological processes; and plate interactions. Four hours lecture. *Prerequisites: Geology 325, 330 and 360.* (4 units)

390. Field Camp

Geological field work at selected areas in the western United States. Techniques of geologic mapping and structural, petrologic, stratigraphic, and paleontologic interpretation will be used to interpret the geological history and significance of those areas through reports, maps, cross-sections, and diagrams. *Prerequisites: Geology 340, 350, 360 and consent of instructor.* (8 units)

395. Directed Studies (FWS)

Individual laboratory, field or library study conducted under the direction of a faculty member. A total of six units in Geology 395 may be applied toward graduation. A minimum of two units of Geology 395 are required for the B.S. degree in Geology. *Prerequisites: consent of the office of the School of Natural Sciences and approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

440. Geology of California (F-96)

Interpretation of the geological features and evolution of California. Four hours lecture. Formerly Earth Science 301. *Prerequisite: Geology 250.* (4 units)

450. Geology of North America

Survey of the geologic history, structural geology, stratigraphy, and important geologic features of the geologic province of North America. Four hours lecture. *Prerequisites: Geology 325, 330 and 360.* (4 units)

460. Topics in Applied Geology

A selected topic of applied geology such as engineering geology, groundwater, environmental geology, resource management, well-log analysis, and geological hazards. Four hours lecture. May be repeated for credit as topics change. *Prerequisite: Geology 360 or consent of instructor.* (4 units)

470. Economic Geology and Mineral Resources

Distribution, characteristics, associations, origin, and techniques associated with the recovery of economic mineral, hydrocarbon, and sundry geological resources. Four hours lecture. *Prerequisites: Geology 325 and 330.* (4 units)

520. Readings in Classical Geology

Directed readings of important geologic literature that have shaped our understanding of the earth and its history. May be repeated for credit. *Prerequisite: Geology 250.* (2 units)

530. Scanning Electron Microscopy

Theory and techniques of scanning electron microscopy. Lectures on theory of operation of the scanning electron microscope and specimen preparation. Laboratory includes hands-on training in the use of the scanning electron microscope. Laboratory projects will teach technical aspects of specimen preparation and microscope use. Three hours lecture and six hours laboratory. (Also offered as Biology 530. Students may not receive credit for both.) *Prerequisites: senior standing and consent of instructor.* (5 units)

531. Transmission Electron Microscopy

Theory and techniques of transmission electron microscopy. Lectures on theory of operation of the transmission electron microscope and specimen preparation. Laboratory includes hands-on training in the use of the transmission electron microscope. Laboratory projects will teach technical aspects of specimen preparation and use. Three hours lecture and six hours laboratory. (Also offered as Biology 531. Students may not receive credit for both.) *Prerequisites: senior standing and consent of instructor.* (5 units)

532. Techniques in Ultrastructure Analysis

Specialized techniques in ultrastructural analysis using either the scanning or transmission electron microscope. Topics will vary, but will include specialized techniques in specimen preparation, alternative image detectors, and image analysis. Theory of the analysis and training in the technical aspects will be covered. Three hours lecture and six hours laboratory. (Also offered as Biology 532. Students may not receive credit for both.) *Prerequisites: Biology 530 or 531 or Geology 530 or 531 and consent of instructor.* (5 units)

540. Advanced Topics in Geology

An advanced geologic topic, such as geophysics, carbonate petrology, seismic stratigraphy, biostratigraphy, advanced igneous and metamorphic petrology, volcanic processes, geochemistry, paleoecology, Quaternary geology, geostatistics, micropaleontology, vertebrate paleontology, paleobotany, marine geology, and rock mechanics. May be repeated for credit as topics change. *Prerequisites: Geology 250 and consent of instructor.* (4 units)

545. Laboratory for Advanced Topics in Geology

Laboratory work to accompany some topics offered in Geology 540. Three hours laboratory. May be repeated for credit as topics change. *Corequisite: Geology 540.* (1 unit)

595. Independent Study

Laboratory, field or library research conducted under the direction of a faculty member. A total of six units in Geology 595 may be applied towards the major in geology. *Prerequisites: a minimum overall grade point average of 3.0, consent of the Office of the School of Natural Sciences, and approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

GERMAN

Department of Foreign Languages

University Hall, Room 314
880-5847

Minor

German

Certificate Program

German/English Translators

The German program, open to all interested students, offers courses that develop language capabilities and an appreciation and comprehension of the literature and culture of Germany, Austria and Switzerland. Information on the special interdisciplinary major in German area studies may be obtained from the Department of Foreign Languages.

Courses taught in English are listed under Foreign Languages (Page 173) and Humanities (Page 206). Courses listed below are offered both to fulfill general education requirements and to support other major programs.

MINOR IN GERMAN

Requirements (24 units)

Requirements for a minor in German:

Proficiency in German equal to German 150. Intermediate German or equivalent.

Note: Entering students with previous training in German, and those who are native speakers, should contact the Department of Foreign Languages for information about advanced placement and credit by examination.

Lower-division requirements (12 units)

1. Ger 212. Composition (4)
2. Ger 214. Conversation (4)
3. Ger 216. Introduction to Literary Texts (4)

Upper-division requirements (12 units)

1. Ger 309. Advanced German Composition (4)
2. Eight units chosen from upper-division German courses.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate for German/English Translators

Certificate requirements (36 units)

Proficiency in German equal to German 150. Intermediate German or equivalent and completion of the following requirements with a GPA of 2.7 ("B-") or better.

Note: Entering students with previous training in German, and those who are native speakers, should contact the Department of Foreign Languages for information about advanced placement and credit by examination.

Lower-division requirements (12 units)

1. Ger 212. Composition (4)
2. Ger 214. Conversation (4)
3. Ger 216. Introduction to Literary Texts (4)

Upper-division requirements (24 units)

1. Eng 495. Expository Writing (4)
2. Ger 309. Advanced German Composition (4)
3. Ger 311. Survey of German Literature (4)
4. Ger 312. Business German (4)
5. Ger 313. Technical and Scientific Translation (4)
6. Hum 460. Cultural Studies: Germany (4)

COURSE OFFERINGS IN GERMAN (Ger)

Lower Division

Courses at the 101, 102 and 150 levels require one hour each week in the language laboratory in addition to the regularly scheduled classroom hours.

101. College German I

Fundamentals of pronunciation, structure and German culture designed to develop the ability to use and understand basic spoken German. (4 units)

102. College German II

Further study of the fundamentals of pronunciation, structure and German culture designed to develop the ability to use and understand basic spoken German. Continuation of German 101. (4 units)

150. Intermediate German

Emphasis on oral and written competency at the intermediate level in a cultural context. *Prerequisite:* two years of high school German or equivalent. (4 units)

212. Composition

Comprehensive review of the principles of German grammar, emphasizing their application to composition. *Prerequisite:* German 150 or equivalent. (4 units)

214. Conversation

Practice of oral German stressing the discussion of current topics, panel discussions, debates, short talks and skits. Formerly German 200. *Prerequisite:* German 150 or equivalent. (4 units)

216. Introduction to Literary Texts

Techniques of literary study and analysis. Vocabulary development. *Prerequisite: German 150 or equivalent.* (4 units)

290. German Literature in English

Introduction to German literature read in English translation. (4 units)

Upper Division

Ordinarily, upper-division courses are conducted in German. Students enrolled in these courses will be evaluated on appropriate progress in both the command of the language and the subject matter.

308. Readings in German Literature

Selected literary genre or writer. May be repeated for credit as topics change. *Prerequisite: one of the following: German 212, 214, 216 or consent of instructor.* (4 units)

309. Advanced German Composition

Practice in composition and short essay writing with emphasis on the development of good writing style and expressive vocabulary. Practical application in writing. *Prerequisite: German 212 or 216 or consent of instructor.* (4 units)

310. Advanced German Conversation

Advanced practice of oral German stressing the discussion of topics based in part on current newspapers and periodicals. *Prerequisite: German 214 or consent of instructor.* (4 units)

311. Survey of German Literature

Survey course designed to introduce the student to the major literary movements and representative writers of German speaking cultures. *Prerequisites: German 212, 214, 216 or consent of instructor.* (4 units)

312. Business German

Practice in writing German business letters and translation from German to English of materials useful in business, politics and tourism. *Prerequisite: German 212 or 216 or consent of instructor.* (4 units)

313. Technical and Scientific Translation

Translation from German to English of technical and scientific material. *Prerequisite: German 212 or 216 or consent of instructor.* (4 units)

399. Community Service Project

Credit for performing academically related tasks in such agencies as governmental, social service and educational institutions. May be repeated for a total of six units. No more than six units of credit for Community Service Project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisite: consent of department.* (Credit to be arranged: 1 or 2 units)

HEALTH SCIENCE

Department of Health Science and Human Ecology

Health and Physical Education, Room 235
880-5339

Bachelor of Science

Health Science
with concentrations in:
Community Health Education and Promotion
Environmental Health Science
Health Administration and Planning
School Health

Teaching Credential Program

Health Science

Minor

Health Science

Master of Science

Health Services Administration
(Degree requirements can be found on Page 393.)

Certificate Programs

Community Mental Health
Gerontology
(Gerontology Certificate requirements can be found on Page 292.)

Certification

Audiometrist Certification

FACULTY: Dorothy Chen, Kim Clark, Sandra Cross, Richard Eberst (Chair), Joseph Lovett, David Null, Cindy Paxton, Thomas Timmreck

The Department of Health Science and Human Ecology provides courses of instruction for personal growth, community service, intellectual stimulation and professional career opportunities in the health and environmental fields. The department emphasizes an ecological approach to health and attempts to provide students with the tools necessary to understand factors contributing to the promotion of general health and well-being and the prevention of illness.

The Department of Health Science and Human Ecology offers a Bachelor of Science in Health Science and a Bachelor of Science in Foods and Nutrition. Students seeking a major in foods and nutrition should refer to Page 172 of this catalog for the description of this degree. In addition the department offers a Master of Science in Health Services Administration, see Page 393. The department offers certificates in specialized areas.

A Bachelor of Science in Health Science is appropriate for students preparing to become health professionals, those who want to be health educators or health administrators, or those desiring to work in environmental protection agencies, private businesses or industrial hygiene and safety. The program also is designed to provide a career ladder opportunity for persons currently engaged in health and environmen-

tal occupations or preparing for graduate work in public health, social or natural sciences.

The department offers a blend of traditional and modern approaches to education and career development in the health science field. It encourages multidisciplinary orientation, community interaction and a social outlook, and provides appropriate instruction in the natural sciences. In their senior year, students study in actual community agencies, such as health departments, hospitals, industrial plants, environmental improvement agencies and consumer affairs offices, thus combining theory and practice.

The Environmental Health Science Concentration is the appropriate choice for students who want to become health inspectors (i.e., Registered Environmental Health Specialist), industrial hygienists, or hazardous waste control experts. For those who plan on becoming Registered Environmental Health Specialists, this concentration is approved by the Environmental Specialist Registration Committee of the California State Department of Health Services. Students who are certified by the environmental health coordinator will have met the academic and experience requirements for admittance to the State Environmental Health Specialist Registration Examination.

Pre-professional students of medicine, dentistry, veterinary medicine or other science-related fields seeking a major in health science should refer to Page 64 and consult with a department advisor.

Students interested in fields such as health or environmental law, clinical chemistry, business, health physics, or any other academic discipline should complete the minimum requirements of the major and select appropriate electives in consultation with a department advisor.

B.S. IN HEALTH SCIENCE

Requirements (108 - 118 units)

Requirements for the B.S. in Health Science:

Note: Certain required courses also apply in the university's general education program (refer to Page 57).

Lower-division requirement (5 units)

1. HSci 120. Health and Society: An Ecological Approach (5)

Upper-division requirements (24 units)

1. HSci 352. Environmental Health I (4)
2. HSci 355. Health, Consumer and Environmental Law (4)
3. HSci 367. Human Disease Mechanisms (4)
4. HSci 451. Principles of Epidemiology (4)
5. HSci 470. Health Behavior (4)
6. Four units chosen from:
 - Math 262. Applied Statistics (4)
 - Math 305. Statistics: Hypothesis and Testing Estimation (4)

Concentration (79-89 units)

One of the following four concentrations is required for the major:

Community Health Education and Promotion Concentration (79 units)1. *Five units chosen from:*

- Biol 100. Topics in Biology (5)
- Biol 200. Biology of the Cell (5)
- 2. Biol 220. Principles of Microbiology (5)
- 3. Biol 223. Human Physiology and Anatomy I (5)
- 4. Biol 224. Human Physiology and Anatomy II (5)
- 5. Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
- 6. Chem 206. Fundamentals of Chemistry II: Organic Chemistry (5)
- 7. Chem 207. Fundamentals of Chemistry III: Biochemistry (5)
- 8. HSci 301. Principles of Health Education for Health Educators (4)
- 9. HSci 310. Health and Human Sexuality (4)
- 10. HSci 342. Nutrition for Your Health (4)
- 11. HSci 364. Drug and Alcohol Use and Abuse (4)
- 12. HSci 371. Community Health Services (4)
- 13. HSci 423. Health and Wellness of Older Adults (4)
- 14. HSci 471. Health Promotion: Program Planning and Evaluation (4)
- 15. HSci 489. Pre-Field Study Practicum (2)
- 16. HSci 492A. Field Study: Action/Research in Human Ecology and Health (5)
- 17. HSci 492B. Field Study: Action/Research in Human Ecology and Health (5)
- 18. HSci 598. Research Methodology in Health Science (4)

Environmental Health Science Concentration (89 units)

- 1. Biol 200. Biology of the Cell (5)
- 2. Biol 201. Biology of Organisms (5)
- 3. Biol 202. Biology of Populations (5)
- 4. Biol 320. Microorganisms (6)
- 5. Chem 206. Fundamentals of Chemistry II: Organic Chemistry (5)
- 6. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
- 7. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
- 8. HSci 353. Environmental Health II (5)
- 9. HSci 357. Hazardous Material Control (4)
- 10. HSci 363. Toxicology (2)
- 11. HSci 490. Health Service Administration (4)
- 12. HSci 496. Internship in Environmental Health (6)
- 13. *Four units chosen from:*
 - Math 192. Methods of Calculus (4)
 - Math 211. Basic Concepts of Calculus (4)
- 14. *A minimum of thirteen units, choose Group A or B below:*

Group A:

- Phys 121. Basic Concepts of Physics I (5)
- Phys 122. Basic Concepts of Physics II (4)
- Phys 123. Basic Concepts of Physics III (4)

Group B:

- Phys 221. General Physics I (5)
- Phys 222. General Physics II (5)
- Phys 223. General Physics III (5)

15. *Thirteen units of Health Science electives chosen from:*

- HSci 322. Air Pollution (2)
- HSci 324. Radiological Health and Safety (2)
- HSci 356. Housing and Institutions (2)
- HSci 366. Occupational Health and the Work Environment (2)
- HSci 374. Basic Audiometry and Hearing Problems (4)
- HSci 381. Occupational Safety (4)
- HSci 425. Hearing Conservation and Noise Measurement (2)
- HSci 430. Food-borne Illnesses and Their Prevention (4)
- HSci 458. Vector and Zoonotic Disease Control (4)
- HSci 476. Industrial Hygiene (4)
- HSci 477. Environmental Health Engineering (4)
- HSci 478. Environmental Health Management (4)
- HSci 595. Independent Study (1-6)

Health Administration and Planning Concentration (82 units)

- 1. Acct 211. Principles of Accounting I (4)
- 2. *Five units chosen from:*
 - Biol 100. Topics in Biology (5)
 - Biol 200. Biology of the Cell (5)
 - 3. Biol 223. Human Physiology and Anatomy I (5)
 - 4. Biol 224. Human Physiology and Anatomy II (5)
 - 5. CSci 121. Computer Technology and People (2)
 - 6. CSci 123. Using Computer Software (2)
- 7. *Four units chosen from:*
 - Econ 200. Principles of Microeconomics (4)
 - Econ 202. Principles of Macroeconomics (4)
- 8. HSci 371. Community Health Services (4)
- 9. HSci 415. Medical Care Organizations (4)
- 10. HSci 422. Health Planning (4)
- 11. HSci 423. Health and Wellness of Older Adults (4)
- 12. *Four units chosen from:*
 - HSci 427. Hospital Administration (4)
 - HSci 452. Special Topics in Health Science and Human Ecology (4)
 - HSci 455. Organization and Management of Long-Term Care Facilities (4)
- 13. HSci 460. Strategic Planning and Marketing in the Health Care System (4)
- 14. HSci 489. Pre-Field Study Practicum (2)
- 15. HSci 490. Health Service Administration (4)
- 16. HSci 492A. Field Study: Action/Research in Human Ecology and Health (5)
- 17. HSci 492B. Field Study: Action/Research in Human Ecology and Health (5)
- 18. HSci 598. Research Methodology in Health Science (4)
- 19. *Eleven units of health science electives or other electives approved by an advisor.*

School Health Concentration (85 units)

1. *Five units chosen from:*
 - Biol 100. Topics in Biology (5)
 - Biol 200. Biology of the Cell (5)
2. Biol 220. Principles of Microbiology (5)
3. Biol 223. Human Physiology and Anatomy I (5)
4. Biol 224. Human Physiology and Anatomy II (5)
5. Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
6. HSci 301. Principles of Health Education for Health Educators (4)
7. HSci 310. Health and Human Sexuality (4)
8. *Four units chosen from:*
 - HSci 332. Health Education in the Elementary School (4)
 - HSci 333. Health Education in the Secondary School (4)
9. HSci 334. School Health Administration and Planning (2)
10. HSci 364. Drug and Alcohol Use and Abuse (4)
11. HSci 371. Community Health Services (4)
12. HSci 471. Health Promotion: Program Planning and Evaluation (4)
13. HSci 489. Pre-Field Study Practicum (2)
14. HSci 492A. Field Study: Action/Research in Human Ecology and Health (5)
15. HSci 492B. Field Study: Action/Research in Human Ecology and Health (5)
16. PE 200. First Aid (2)
17. Twenty units of health science electives or other electives approved by an advisor.

TEACHING CREDENTIAL PROGRAM

The School Health Concentration is the appropriate choice for all students who want to teach health science in schools. It meets the requirements for secondary teaching level major in health science. Students wishing to be recommended for a single subject teaching credential in Health Science must complete the requirements for this concentration as well as certain prerequisites to the teacher education program. For information about the professional education component, admission to the teacher education program, or specific requirements for the single subject waiver program see Page 146 or contact the School of Education C.A.S.E.-Credentials Office.

MINOR IN HEALTH SCIENCE

Requirements (31 units)

Requirements for a minor in Health Science:*Lower-division requirement (5 units)*

1. HSci 120. Health and Society: An Ecological Approach (5)

Upper-division requirements (26 units)

1. HSci 352. Environmental Health I (4)
2. HSci 451. Principles of Epidemiology (4)
3. Eighteen units of upper-division health science courses chosen in consultation with an advisor.

DEPARTMENTAL HONORS

A graduating senior will be awarded departmental honors in health science after meeting the following requirements:

1. At least a 3.5 grade point average in all courses required for the major taken at California State University, San Bernardino;
2. At least a 3.0 ("B") grade point average overall;
3. An "A-" or better in Health Science 595. Independent Study (at least 4 units).

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Community Mental Health*Certificate requirements (30 units)*

1. HSci 371. Community Health Services (4)
2. HSci 421. Community Mental Health (4)
3. Psyc 387. Community Psychology (4)
4. Psyc 390. Abnormal Psychology (4)
5. *Fourteen units of electives chosen from the following in consultation with an advisor:*
 - HSci 364. Drug and Alcohol Use and Abuse (4)
 - HSci 399A. Community Service Project (1)
 - HSci 399B. Community Service Project (2)
 - HSci 423. Health and Wellness of Older Adults (4)
 - HSci 451. Principles of Epidemiology (4)
 - HSci 470. Health Behavior (4)
 - HSci 492A. Field Study: Action/Research in Human Ecology and Health (5)
 - Psyc 201. Developmental Psychology (4)
 - Psyc 315. Communication Processes (4)
 - Psyc 329. Psychology of Adulthood and Aging (4)
 - Psyc 333. Drugs and Behavior (4)
 - Psyc 351. Behavior Modification: Principles and Applications (4)
 - Psyc 384. Personality and Social Development (4)
 - Psyc 385. Personality (4)
 - Psyc 386. Introduction to Psychotherapy (4)
 - Psyc 391. Psychopathology of Childhood (4)

- Soc 355. Medical Sociology (4)
 Soc 356. Sociology of Mental Illness (4)

Certificate in Gerontology

The Department of Health Science and Human Ecology participates in the interdisciplinary certificate in Gerontology. Details concerning this certificate are found under Sociology Certificate Programs, beginning on Page 292.

CERTIFICATION

Audiometrist Certification

Certification requirements (4 units)

The following course leads to a certificate of registration as a school audiometrist issued by the California State Department of Health Services:

- HSci 374. Basic Audiometry and Hearing Problems (4)

COURSE OFFERINGS IN HEALTH SCIENCE (HSci)

Lower Division

120. Health and Society: An Ecological Approach

Nature and function of health in society through study of the fundamental concepts of living systems and their implication in the processes of health and illness in the human organism. Major health problems are analyzed to contribute to the student's understanding of his or her role as an individual and as a member of the community. Four hours lecture and three hours laboratory. *Prerequisite: satisfactory score on the Entry Level Mathematics examination.* (5 units)

225. The Dietetic Profession

An overview of the professional development of dietetic education and scope of dietetic practice. (1 unit)

245. Foods

Basic principles and techniques of food selection and preparation. Includes food safety, legislation and consumer issues. Four hours lecture and three hours laboratory. (CAN H EC 8) (5 units)

295. Special Projects in Health Science

Individual investigation, research, study or survey of selected problems. *Prerequisite: consent of the Health Science Department.* (Credit to be arranged: 1 or 2 units)

Upper Division

301. Principles of Health Education for Health Educators

Foundations of the health education process. Role of a health educator in school, community, work and hospital settings, as well as consultant in health promotion activities. Course does not fulfill the state health education requirement. *Prerequisite: Health Science 120 or consent of instructor.* (4 units)

310. Health and Human Sexuality

Relationship between health and human sexuality with a theme of prevention of disease, disorder and dysfunction through education. *Prerequisite: Health Science 120 or consent of instructor.* (4 units)

322. Air Pollution

Principles of air quality management, including health implications of polluted air, applicable fundamentals of meteorology, air quality regulations and current concepts in air pollution control technology. *Prerequisites: college-level courses in biology and chemistry.* (2 units)

324. Radiological Health and Safety

Ionizing radiation and its effects on health. Methods of identification, evaluation and control are emphasized. *Prerequisites: college-level courses in biology, chemistry and physics.* (2 units)

332. Health Education in the Elementary School

Health education concepts and content applied specifically to grades K-6. Stresses communication and instruction in health education for the teacher/school nurse, emphasizing the uniqueness and personal nature of health; techniques of health education; recognition of health education and other aspects of normal health and diseases/disorders common in children. Conforms with the State Framework for Education in the Health Sciences. *Prerequisite: Health Science 120 or consent of instructor.* (4 units)

333. Health Education in the Secondary School

Health education concepts and content applied to grades 7-12. Stresses the personal nature of health instruction for the teacher/school nurse; the importance of individual responsibility in health related issues; characteristics of junior high and high school students and their relationship with health education techniques; recognition of health educational and other aspects of normal health and diseases/disorders common in adolescents and teenagers. Conforms with the State Framework for Education in the Health Sciences. *Prerequisite: Health Science 120 or consent of instructor.* (4 units)

334. School Health Administration and Planning

Philosophical framework and history of the school health education program, including organization, administration and legal aspects. Emphasis on the roles of school health administrators, teachers and nurses within the contexts of school health services, health instruction and healthful school living. Some aspects of college health programs will also be discussed. *Prerequisite: Health Science 120 or consent of instructor.* (2 units)

336. Alcohol and Drug Abuse Education

Analysis of the factors influencing human use or abuse of drugs, alcohol and other substances and their effects on the health and well-being of the individual, family and society. This course conforms to the State Framework for Education in the Health Sciences. This media-assisted course is delivered in a nontraditional format to sites distant from the main campus which employs videotaped lecture presentations supplemented by periodic discussions and class meetings with the instructor. (2 units)

342. Nutrition for Your Health

Application of basic nutrition principles to the prevention of disease through the life cycle; food choices that represent these principles; current trends, fads and fallacies in nutrition. May not be counted towards fulfilling requirements in the nursing major. Formerly Health Science 358. (4 units)

345. Food Science

Processing, storage, preservation and maturation of food and their effects on its composition, palatability, quality and safety. Four hours lecture and three hours laboratory. Formerly Health Science 358. *Prerequisites: Chemistry 206 or equivalent and Health Science 245.* (5 units)

352. Environmental Health I

Introduction to the effects of the physical, chemical, and biological environments and their impacts on human health and well-being. Emphasis is placed on the principles of assessment, evaluation and control of environmental risks related to public health. Discussion topics include air, water and solid waste pollution plus food protection, radiation, hazardous wastes and environmental impacts. *Prerequisites: college-level course in biology and Health Science 120.* (4 units)

353. Environmental Health II

Methods of measuring and evaluating environmental and occupational health risks. Environmental health laws and regulations as well as compliance with current regulations. Laboratory and field experience for determining quality of air, water, food, soils and environments within buildings are included as well as instruction on noise control and hazardous waste disposal. Four hours lecture and three hours laboratory. *Prerequisites: Health Science 352, college-level biology and chemistry courses.* (5 units)

355. Health, Consumer and Environmental Law

Health laws and regulations, basis for their enactment and impact on facilities and programs, e.g. hospitals, health planning. Impact of environmental law on public health and mechanisms involved in protecting health consumers. Legal basis of the health care system and related aspects. (4 units)

356. Housing and Institutions

Basic health principles and environmental quality considerations associated with housing and institutions (for example, health care, educational, penal). Relationship of housing quality to physical, socio-economic and ethnic factors and their influence on health. (2 units)

357. Hazardous Material Control

Major methods for the control of hazardous wastes from generation through disposal, including disease, environmental and legal aspects of hazardous wastes as well as discussion of various disposal techniques. *Prerequisites: college-level biology and chemistry courses.* (4 units)

359. International Perspectives on Health

Study and comparison of patterns in personal and community health in developing and industrialized nations. Introduction to the impact of behavioral, ecological, economic and governmental factors on health status and health care organization and delivery. Discussion of national, regional, and interna-

tional health problems and programs. *Prerequisites: Health Science 120 and one of the following: Anthropology 102, Psychology 100 or Sociology 100.* (4 units)

361. Principles of Accident Prevention

Ecological and medical aspects of accident prevention in residential, work, educational, medical and recreational environments. Legal aspects and governmental organizations involved in accident prevention. (2 units)

362. Principles of Nutrition

Physiologic and chemical roles of carbohydrates, lipids, proteins, vitamins, minerals and water in the human body. Factors affecting absorption, utilization and the need for nutrients. *Prerequisites: Chemistry 205, 206 and 207 or consent of instructor.* (4 units)

363. Toxicology

Principles of chemical toxicity and relationships to public health, including general principles, intoxication and disease, dose response tests, mechanisms of action and principles of antidotal therapy. Specific toxicologic studies as related to various food, drug, consumer, industrial and environmental problems. *Prerequisites: college-level biology and chemistry courses.* (2 units)

364. Drug and Alcohol Use and Abuse

Analysis of factors influencing human use or abuse of drugs, alcohol and other substances and their effects on the health and well-being of the individual, family and society. This course conforms with the State Framework for Education in the Health Sciences. Formerly Health Science 336. (4 units)

365. Nutrition Throughout the Life Cycle

Nutritional needs through the life cycle. Factors that affect cultural, ethnic and religious food preferences in individuals and groups. *Prerequisite: Health Science 362.* (4 units)

366. Occupational Health and the Work Environment

Identification, evaluation and control of hazards prevailing in the work environment. Factors affecting man in his working environment. Safety and health legislation. Field trips to selected industries. (2 units)

367. Human Disease Mechanisms

Ecological and medical aspects of human disease and the body's response to the disease process and the effects on normal function. *Prerequisites: Health Science 120; and either Biology 223 and 224 or Biology 200, 201 and 202.* (4 units)

368. Diet and Disease I

Techniques of assessing, evaluating, planning and counseling to improve nutritional status. Role of dietary modifications in prevention and treatment of pathological conditions such as heart disease, cancer and diabetes. *Prerequisite: Health Science 365.* (4 units)

369. Diet and Disease II

Role of dietary modifications in the prevention and treatment of pathological conditions; includes diets for allergies, liver disease, kidney disease and gastrointestinal disorders. *Prerequisite: Health Science 368.* (4 units)

371. Community Health Services

Consideration and comparison of traditional and current programs in official and voluntary health agencies. (4 units)

374. Basic Audiometry and Hearing Problems

Examination of the anatomy and physiology of the auditory mechanism. Nature of the acoustic stimulus, hearing disorders, problems of the hard of hearing and pure-tone audiometry. This course leads to the certificate of registration as school audiometrist, granted by the California Department of Health Services upon successful completion. (4 units)

378. Peer Education Training in Health Science

Content and methods related to peer education in Health Science. Small group process, techniques in health counseling, accessing resources and referrals and the development of presentation skills will be emphasized. (4 units)

379. Peer Education Supervision in Health Science

Ongoing supervision for those students previously trained as peer educators in health science who are currently providing services to the CSUSB Peer Education Program. *Prerequisite: Health Science 378.* (2 units)

381. Occupational Safety

Principles of industrial safety, including general principles; accident control; industrial, mechanical, electrical, chemical and flammability hazards; fire and explosion protection; accident investigation; industrial safety inspections; record keeping; safety training and emergency planning; methods of industrial safety management as a unifying theme. (4 units)

399. Community Service Project

Credit for performing academically related tasks in such agencies as governmental, social service and educational institutions. May be repeated for a total of six units. No more than six units of credit for Community Service Project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisite: consent of department.* (Credit to be arranged: 1 or 2 units)

404. Women's Health Issues

Analysis of biological, psychological and sociocultural issues related to the health and health care of women. Emphasis on responsibilities of women in maintaining and promoting their health. (4 units)

415. Medical Care Organizations

Analysis of the organization of health and medical care services, resources, facilities, financial aspects and other related topics. *Prerequisite: Health Science 371 or consent of instructor.* (4 units)

421. Community Mental Health

Mental health care delivery system with emphasis on a community approach to prevailing problems and issues. Methods of evaluating community and school mental health education programs; survey of available resources. (4 units)

422. Health Planning

Health planning systems and procedures. *Prerequisite: Health Science 371 or consent of instructor.* (4 units)

423. Health and Wellness of Older Adults

The physiological, sociological and psychological aspects of the aging process. Disease prevention and health promotion concepts related to the quality of life of older adults. (4 units)

424. Health Facilities Planning

Activities in health care facilities planning, for example, architectural, engineering, contractual, environmental and other regulatory aspects. Facility planning processes, environmental forces, administrative coordination and historical development. (4 units)

425. Hearing Conservation and Noise Measurement

Principles of audiology and noise measurements and their application to environmental and industrial hearing conservation programs. (2 units)

427. Hospital Administration

Organization and administration of hospital facilities including planning and evaluation of services. Role of the hospital as part of the community. *Prerequisites: Health Science 371 and Management 302 or Psychology 302, or consent of instructor.* (4 units)

430. Food-Borne Illnesses and Their Prevention

Food-borne illnesses and food poisoning of microbial and chemical origins, causation and environmental control measures; proper environmental control measures; and proper environmental health conditions involved in storage, transportation and service of foods in order to minimize health dangers. *Prerequisite: Health Science 352.* (4 units)

435. Health and Human Development

Health needs and problems of children from prenatal development through adolescence. Appraisal, delivery of necessary services and childhood health promotion skills and practices. This course conforms with the State Framework for Education in the Health Sciences. (4 units)

440. Family Health Issues for Educators

Factors which influence the overall health status of today's family, e.g. nutrition, sexuality, drugs, stress and interpersonal relationships. This course conforms with the State Framework for Education in the Health Sciences. (2 units)

445. Community Nutrition

The role of public and private agencies in nutrition programs. Application of nutrition principles to the improvement of the health status of individuals and groups in the community. Emphasis on program planning, educational methods and evaluation. *Prerequisites: Health Science 301 and 369.* (4 units)

447. Advanced Nutrition

Evaluation and interpretation of current nutritional research findings. Application to dietetic practice. *Prerequisite: Health Science 369.* (4 units)

451. Principles of Epidemiology

Distribution and dynamics of human health problems; principles and procedures used to determine circumstances under which disease occurs or health prevails. The broadened scope of epidemiology is examined through case studies and community health approach. *Prerequisite: Health Science 120 or consent of instructor.* (4 units)

452. Special Topics in Health Science and Human Ecology

Examination of selected topics of current interest in health science. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (4 units)

455. Organization and Management of Long-Term Care Facilities

Examination of the professional administrative role and managerial concepts in long-term facilities, including nursing homes. *Prerequisites: Health Science 371 and Management 302 or Psychology 302, or consent of instructor.* (4 units)

458. Vector and Zoonotic Disease Control

Identification and control of vector-caused and zoonotic diseases. Discussion of natural and chemical methods of control and their impact on health and environmental quality. *Prerequisites: college-level biology and chemistry courses.* (4 units)

460. Strategic Planning and Marketing in the Health Care System

Strategy-oriented management planning process, basic approaches and methodologies employed in strategic planning and health care marketing; economic and political forces which give form and shape to the health care marketplace. (4 units)

465. Food Service Production Management

Principles and procedures of menu planning, quantity food production, production scheduling, recipe adaptation, equipment operation, sanitation and formula costing. Three hours lecture and six hours laboratory. *Prerequisite: Health Science 345.* (5 units)

466. Food Service Procurement

Principles of purchasing in food service institutions. Selection and storage of foods and equipment. *Prerequisite: Health Science 465.* (4 units)

467. Food Service Systems Management

Distribution and management of resources in food service management: personnel, facilities, materials, time and money. *Prerequisites: Health Science 466 and Management 302 or Psychology 302.* (4 units)

470. Health Behavior

Theoretical foundation for the development, analysis and interpretation of individual and community influences on decisions which impact health status. Strategies for health behavior modification. *Prerequisite: Health Science 120 or consent of instructor.* (4 units)

471. Health Promotion: Program Planning and Evaluation

Introduction to the methods and processes of health promotion and change programs for both individuals and groups. Emphasis in program design, implementation and evaluation. *Prerequisite: Health Science 470.* (4 units)

474. Advanced Audiometry

Hearing tests, their objectives and uses for diagnostic and rehabilitative purposes. Techniques for administering auditory tests and the interpretation of their results emphasizing pure-tone audiometry. *Prerequisite: Health Science 374 or 425 or equivalent.* (4 units)

476. Industrial Hygiene

Toxic chemicals in the industrial environment, their influence on human health and their relationship to occupational medicine and the administration of industrial hygiene programs. *Prerequisites: college-level biology and chemistry courses, or consent of instructor.* (4 units)

477. Environmental Health Engineering

Methods used in designing systems which mitigate environmental contamination of air, soil, and water. Topics include stream re-aeration, kinetics of biological degradation, soil mechanics, adsorption and other principles related to environmental media protection and renovation. *Prerequisites: Health Science 120 and 352.* (4 units)

478. Environmental Health Management

Methods of management for promoting optimum environmental health, emphasizing land use planning, environmental impact reporting, facility planning and risk assessment. *Prerequisite: Health Science 120.* (4 units)

489. Pre-Field Study Practicum

Preparatory work for field assignments through classroom discussion, agency contacts and experience. *Prerequisites: health science major and senior class standing and consent of department.* (2 units)

490. Health Service Administration

Introduction to management theory and practice as they apply to the administration of health service programs. Emphasis is placed on the planning, analysis, organizing, staffing, directing and evaluation functions necessary to administration of health service organizations. Budgeting functions and processes are discussed as they relate to health services administration. *Prerequisite: Health Science 120.* (4 units)

492. Field Study: Action/Research in Human Ecology and Health

Individual and team field studies and research in agencies with activities relevant to career goals and interests. *Prerequisite: Health Science 489 or 491 or consent of instructor.*

A. (5 units)

B. (5 units)

C. *Corequisite: Health Science 492A.* Open only to students with an advisement area in environmental health and safety. Units awarded are not counted toward the 186 quarter-unit requirement for the major. (2.5 units)

D. *Corequisite: Health Science 492B.* Open only to students with an advisement area in environmental health and safety. Units awarded are not counted toward the 186 quarter-unit requirement for the major. (2.5 units)

496. Internship in Environmental Health

Individual studies in environmental health. Students will be placed with public health agencies to gain applied and/or research experience. *Prerequisites: health science majors with a concentration in environmental health science and senior class standing or consent of instructor.* (6 units)

525. Health Data Analysis and Demography

Introduction to analysis of health data using statistical procedures, development of skills for determining analytical techniques and procedures for interpretation and presentation of resultant data; examination of sources and evaluation of demographic data and relationships to such topics as fertility, morbidity, mortality, population projection, life tables and migration. *Prerequisites: Health Science 451 and Mathematics 305 or 350 or consent of instructor.* (4 units)

590. Current Topics in Health Administration and Planning

Presentation and analysis of a particular issue or topic in health services administration or planning. May be repeated for credit as topics change. (2 units)

595. Independent Study

Research in special topics including library studies and/or laboratory work under the direction of a faculty member. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

598. Research Methodology in Health Science

Research methods and application to contemporary health and environmental problems. Health data analysis and development of skills for determining appropriate analytical techniques and procedures. *Prerequisite: Mathematics 305 or 350 or consent of instructor.* (4 units)

HISTORY

Department of History

Faculty Office Building, Room 146
880-5524

Bachelor of Arts

History - Track A
History - Track B

Teaching Credential Program

Single Subject

Minor

History

Master of Arts

Secondary Education - History Option
(Degree requirements can be found on Page 360.)

FACULTY: Robin Balthrope, Elliot Barkan, Robert Blackey, Lanny Fields (Chair), Ward McAfee, Michael Persell, Cheryl Riggs, Pedro Santoni, Kent Schofield

History has been called the "extension of memory" which enables one to utilize past experiences. The study of history nurtures and refines a broad spectrum of skills which make not only for good historians and teachers, but for good workers in many fields where men and women are sought who can read critically, analyze and write. In fact, while teaching and research have traditionally been the avenues history majors have followed, a multitude of career opportunities has always existed for those who like history but do not wish to become teachers. The skills history majors learn and refine in thinking, research, problem defining and solving, speaking and writing—in conjunction with skills acquired from other selected courses—ideally suit them for positions in the business world and with governmental agencies.

The History Department has developed a major that can be completed by taking one of two tracks: Track A (designed for students wishing to be recommended for a single subject credential in social science) and Track B (designed for students interested in any of the other fields open to History majors). Both tracks include courses that provide surveys of United States, world and European history, a course from the ancient or medieval period, two courses in nonwestern history, and an introduction to the nature of historical study. To meet the remainder of the requirements for Track A, students are required to take a number of other courses in history and from among the other social science fields. To meet the remainder of the requirements for Track B, students are required to choose from a wide spectrum of courses.

Currently, the department consists of faculty specializing in the areas of American, European, Asian and Latin American history.

Lower-division courses may not be taken by students who have received credit for work in the subject in advance of the lower-division course, except where permission is granted by the department.

B.A. IN HISTORY - TRACK A (SOCIAL SCIENCE CREDENTIAL OPTION)

Requirements (121 units)

Requirements for the B.A. in History - Track A (Social Science Credential Option):

Core Requirements (69 units, 21 of which also count toward meeting General Education requirements):

1. Anth 102. Introduction to Anthropology: Culture and Society (4)
2. *Four units chosen from:*
 - Anth 140. World Civilizations I, the Rise of Civilization (4)
 - Hist 140. World Civilizations I, the Rise of Civilization (4)
3. Econ 104. Introduction to Economics (4)
4. Econ 200. Principles of Microeconomics (4)
5. Econ 202. Principles of Macroeconomics (4)
6. Geog 103. Physical Geography (5)
7. *Four units chosen from:*
 - Geog 100. Introduction to Human Geography (4)
 - SSci 165. Regions and Peoples of the World (4)
 - 8. Geog 302. Geography of California (4)
 - 9. Hist 142. World Civilizations II, the Civilizations of the East and West (4)
10. Hist 144. World Civilizations III, the Expansion of Europe (4)
11. Hist 200. United States History to 1877 (4)
12. Hist 201. United States History, 1877 to the Present (4)
13. Hist 370. History of California (4)
14. PSci 203. American Government (4)
15. PSci 330. State and Local Politics (4)
16. Psc 100. Introduction to Psychology (4)
17. Soc 100. The Study of Society (4)

History requirements (44 units)

1. *Four units chosen from:*
 - Hist 380. History of World Religions (4)
 - Hist 589. Revolutions in History (4)
 2. *Four units chosen from:*
 - Hist 320. History of Ancient Greece (4)
 - Hist 321. History of Rome (4)
 - Hist 400. Early Medieval Europe (4)
 - Hist 401. Late Medieval Europe (4)
 3. Hist 300. Early Modern Europe, the Renaissance to 1815 (4)
- or
- Eight units as follows:*
- Hist 402. Renaissance and Reformation (4)
 - Hist 403. The Age of Absolutism and Enlightenment (4)
 - Hist 520. Tsarist Russia (4)

4. Hist 301. Modern Europe, 1815 to the Present (4)
or
Eight units chosen from:
Hist 408. The Development of 20th Century Europe, 1890-1945 (4)
Hist 410. Hitler's Europe (4)
Hist 501. Britain, 1688-1901 (4)
Hist 503. Europe Since 1945 (4)
Hist 510. Modern France (4)
Hist 521. The Soviet Union (4)
Hist 535. Studies in European National History (4)
5. *Eight units chosen from:*
Hist 331. Black History I: The African Experience (4)
Hist 382. History of the Middle East (4)
Hist 390. History of Modern Mexico (4)
Hist 426. Early Imperial China (4)
Hist 428. Medieval China (4)
Hist 430. China, 1895-Present (4)
Hist 432. Communist China (4)
Hist 434. East Asia Since World War II (4)
Hist 440. Japan, 1868-Present (4)
Hist 465. Modern Central America (4)
Hist 466. Foreign Relations of Latin America (4)
Hist 469. Colonial Latin America (4)
Hist 470. Modern Latin America (4)
6. *Four units chosen from:*
Hist 334. Black History II: The American Experience (4)
Hist 350. The American Colonies, 1607-1783 (4)
Hist 351. The Evolution of American Democracy, 1783-1840 (4)
Hist 354. Civil War and Reconstruction (4)
Hist 356. The United States, 1877-1917 (4)
Hist 357. The United States, 1917-1945 (4)
Hist 359. The United States Since 1945 (4)
Hist 391. Chicano History (4)
Hist 422. 20th Century Americans (4)
Hist 509. United States History in the Classroom (4)
Hist 513. Women in U.S. History (4)
Hist 540. Constitutional History of the United States (4)
Hist 556. Foreign Relations of the United States (4)
Hist 560. History of the American West (4)
Hist 565. Ethnic Minorities in American History (4)
Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
Hist 567. The Asian-American Experience (4)
7. Hist 490. The Study of History (4)
8. Twelve units of electives must be chosen from available upper-division history electives.
Note: Four units of every eight units chosen in lieu of History 300 and 301 in categories 3 and 4 may count as electives in category 8 for a maximum of eight units.

Other requirements (8 units)

1. *Four units chosen from:*
Econ 410. Money and Banking (4)
May choose only one of the following:
Econ 421. Economic History of the United States (4)
Hist 421. Economic History of the United States (4)
Econ 475. Public Finance (4)
Geog 440. Understanding the City (4)
PSci 320. The Legislative Process (4)
PSci 410. American Constitutional Law (4)
PSci 411. The Bill of Rights (4)
PSci 431. The American Presidency (4)
Soc 318. Social Welfare Policies and Services (4)
Soc 359. Law and Society (4)
2. *Four units chosen from:*
Econ 352. The Economics of Poverty and Discrimination (4)
Geog 415. Urban Planning and Land Development (4)
PSci 326. Political Parties and Interest Groups (4)
PSci 450. Political Socialization (4)
Soc 364. Public Opinion and Propaganda (4)
Soc 432. Political Sociology (4)

B.A. IN HISTORY - TRACK B

Requirements (68 units)

Requirements for the B.A. in History—Track B:

1. *Four units chosen from:*
Anth 140. World Civilizations I, the Rise of Civilization (4)
Hist 140. World Civilizations I, the Rise of Civilization (4)
2. Hist 142. World Civilizations II, the Civilizations of the East and West (4)
3. Hist 144. World Civilizations III, the Expansion of Europe (4)
4. Hist 200. United States History to 1877 (4)
or
Eight units chosen from:
Hist 350. The American Colonies, 1607-1783 (4)
Hist 351. The Evolution of American Democracy, 1783-1840 (4)
Hist 354. Civil War and Reconstruction (4)
5. Hist 201. United States History, 1877 to the Present (4)
or
Eight units chosen from:
Hist 356. The United States, 1877-1917 (4)
Hist 357. The United States, 1917-1945 (4)
Hist 359. The United States Since 1945 (4)
6. *Four units chosen from:*
Hist 320. History of Ancient Greece (4)
Hist 321. History of Rome (4)
Hist 400. Early Medieval Europe (4)
Hist 401. Late Medieval Europe (4)

7. Hist 300. Early Modern Europe, the Renaissance to 1815 (4)

or

Eight units as follows:

Hist 402. Renaissance and Reformation (4)

Hist 403. The Age of Absolutism and Enlightenment (4)

Hist 520. Tsarist Russia (4)

8. Hist 301. Modern Europe, 1815 to the Present (4)

or

Eight units chosen from:

Hist 408. The Development of 20th Century Europe, 1890-1945 (4)

Hist 410. Hitler's Europe (4)

Hist 501. Britain, 1688-1901 (4)

Hist 503. Europe Since 1945 (4)

Hist 510. Modern France (4)

Hist 521. The Soviet Union (4)

Hist 535. Studies in European National History (4)

9. Hist 490. The Study of History (4)

10. *Eight units chosen from:*

Hist 331. Black History I: The African Experience (4)

Hist 382. History of the Middle East (4)

Hist 390. History of Modern Mexico (4)

Hist 426. Early Imperial China (4)

Hist 428. Medieval China (4)

Hist 430. China, 1895-Present (4)

Hist 432. Communist China (4)

Hist 434. East Asia Since World War II (4)

Hist 440. Japan, 1868-Present (4)

Hist 465. Modern Central America (4)

Hist 466. Foreign Relations of Latin America (4)

Hist 469. Colonial Latin America (4)

Hist 470. Modern Latin America (4)

11. Twenty-four units of other upper-division course work in history. With the approval of the department advisor, up to eight units of upper-division course work in related fields may be counted toward the upper-division course requirement in history. Students are encouraged to take a complete sequence of courses in a foreign language appropriate to their area interests in the history major.

Note: Four units of every eight units chosen in lieu of History 200, 201, 300 and 301 in categories 4, 5, 7 and 8 may count as electives in category 11 for a maximum of 16 units.

TEACHING CREDENTIAL PROGRAM

Students wishing to be recommended for a single subject teaching credential in history must complete Track A of the Bachelor of Arts in History as well as certain prerequisites to the teacher education program. For information about the professional education component, admission to the teacher education program, or specific requirements for the single subject credential see Page 146 or contact the School of Education C.A.S.E.-Credentials Office.

All Single Subject Waiver programs are being reviewed and may be revised due to changes in Statewide requirements. Students who declare the B.A. or B.S. in History after January 1995 and who wish to eventually be recommended for acceptance into the teaching credential program must follow the new requirements available in the History Department Office or the School of Social and Behavioral Sciences Office.

MINOR IN HISTORY

Requirements (32 units)

Requirements for a minor in History:

Requirements for a minor in history include thirty-two units, of which 24 units must be upper-division, to include 12 units as follows:

1. United States history

Four units chosen from :

Hist 312. Historical Archaeology (4)

Hist 334. Black History II: The American Experience (4)

Hist 350. The American Colonies, 1607-1783 (4)

Hist 351. The Evolution of American Democracy, 1783-1840 (4)

Hist 354. Civil War and Reconstruction (4)

Hist 356. The United States, 1877-1917 (4)

Hist 357. The United States, 1917-1945 (4)

Hist 359. The United States Since 1945 (4)

Hist 370. History of California (4)

Hist 391. Chicano History (4)

Hist 395. Topics in History (4)

Hist 396. Topics in History (2)

Hist 421. Economic History of the United States (4)

Hist 422. 20th Century Americans (4)

Hist 509. United States History in the Classroom (4)

Hist 513. Women in U.S. History (4)

Hist 540. Constitutional History of the United States (4)

Hist 556. Foreign Relations of the United States (4)

Hist 560. History of the American West (4)

Hist 565. Ethnic Minorities in American History (4)

Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)

Hist 567. The Asian-American Experience (4)

2. European history

Four units chosen from :

Hist 300. Early Modern Europe, the Renaissance to 1815 (4)

Hist 301. Modern Europe, 1815 to the Present (4)

Hist 320. History of Ancient Greece (4)

Hist 321. History of Rome (4)

Hist 400. Early Medieval Europe (4)

Hist 401. Late Medieval Europe (4)

Hist 402. Renaissance and Reformation (4)

Hist 403. The Age of Absolutism and Enlightenment (4)

- Hist 408. The Development of 20th Century Europe, 1890-1945 (4)
- Hist 410. Hitler's Europe (4)
- Hist 480. History of Christianity I (4)
- Hist 481. History of Christianity II (4)
- Hist 500. Tudor and Stuart England (4)
- Hist 501. Britain, 1688-1901 (4)
- Hist 503. Europe Since 1945 (4)
- Hist 510. Modern France (4)
- Hist 520. Tsarist Russia (4)
- Hist 521. The Soviet Union (4)
- Hist 535. Studies in European National History (4)
- 3. Nonwestern history
 - Four units chosen from:*
 - Hist 331. Black History I: The African Experience (4)
 - Hist 380. History of World Religions (4)
 - Hist 382. History of the Middle East (4)
 - Hist 390. History of Modern Mexico (4)
 - Hist 426. Early Imperial China (4)
 - Hist 428. Medieval China (4)
 - Hist 430. China, 1895-Present (4)
 - Hist 432. Communist China (4)
 - Hist 434. East Asia Since World War II (4)
 - Hist 440. Japan, 1868-Present (4)
 - Hist 465. Modern Central America (4)
 - Hist 466. Foreign Relations of Latin America (4)
 - Hist 469. Colonial Latin America (4)
 - Hist 470. Modern Latin America (4)
 - Hist 589. Revolutions in History (4)

DEPARTMENTAL HONORS

Students majoring in history are eligible to receive honors in history at graduation if the following conditions are met:

1. At least one-half of the course work required in the major is completed at this university;
2. Earned a grade point average of at least 3.5 in the major, including courses for the major taken elsewhere;
3. Earned an overall undergraduate grade point average of 3.0 ("B") or better;
4. Successful completion of History 597. Senior Honors Project, resulting in a thesis paper.

Applications for candidacy must be made by the beginning of the senior year. Approval of candidacy and of the project and project advisor rests with the department. The project advisor and one other faculty reader from the department will have the responsibility for evaluation of the completed thesis paper.

MASTER OF ARTS

The university offers a Master of Arts in Education, Secondary Education Option, with an option in History, for secondary teachers. Details on this graduate program may be secured from the Department of History or the School of Education.

COURSE OFFERINGS IN HISTORY (Hist)

Lower Division

140. World Civilizations I, the Rise of Civilization

Activities and achievements of humans through the rise and diffusion of civilizations in Eurasia, Africa, and the Americas to about the dawn of the Christian era. (Also offered as Anthropology 140. Students may not receive credit for both.) Formerly Social Sciences 140. (4 units) (CAN HIST SEQ C)

142. World Civilizations II, the Civilizations of the East and West

Major civilizations of the past, including the Graeco-Roman world, ancient India and China, the Byzantine and Arabic Empires, and Europe in the Middle Ages. Formerly Social Sciences 142. (4 units) (CAN HIST SEQ C)

144. World Civilizations III, the Expansion of Europe

Rise to dominance of the European states and their impact throughout the world, 1500 A.D. to the present. Formerly Social Sciences 144. (4 units) (CAN HIST SEQ C)

146. American Civilization

Historical development of the fundamental values of the American culture and the influences of these in selected areas of American life. This course meets the state code requirements in the U.S. Constitution and in U.S. history. Formerly Social Sciences 146. (4 units)

200. United States History to 1877

Survey of the history of the United States from the colonial beginnings to 1877. This course meets the state code requirement in U.S. history. It also meets the state code requirement in the U.S. Constitution when taken in conjunction with History 201. (CAN HIST 8) (4 units)

201. United States History, 1877 to the Present

Survey of the history of the United States from 1877 to the present. This course meets the state code requirement in U.S. history. It also meets the state code requirement in the U.S. Constitution when taken in conjunction with History 200. (CAN HIST 10) (4 units)

Upper Division

300. Early Modern Europe, the Renaissance to 1815

Institutions, culture, and political development of Europe from the Renaissance to the end of the Napoleonic Wars. (4 units)

301. Modern Europe, 1815 to the Present

Institutions, culture, and political development of Europe from the congress of Vienna to the present. (4 units)

312. Historical Archaeology

Use of archaeological methods to study historic peoples. Historical and archaeological methods and their results. Focus will be primarily on North America from A.D. 1492 to modern times. (Also offered as Anthropology 312. Students may not receive credit for both.) (4 units)

320. History of Ancient Greece

Greek history from the Minoan and Mycenaean civilizations to the reign of the Roman Emperor Justinian in A.D. 527-565. Formerly History 322. (4 units)

321. History of Rome

Roman history from earliest times to the end of the Roman Empire in the West. Formerly History 322. (4 units)

331. Black History I: The African Experience

Origin of sub-Saharan cultures and development of African civilizations through the 18th century; special emphasis on West Africa and the region's relationship to black people of North America. (4 units)

334. Black History II: The American Experience

Black people in America from the 17th Century to the present day. (4 units)

350. The American Colonies, 1607-1783

The thirteen colonies from European origins to the attainment of independence. (4 units)

351. The Evolution of American Democracy, 1783-1840

Analysis of the development of American society, politics and economy during the Confederation, Federalist, Jeffersonian and Jacksonian Eras. (4 units)

354. Civil War and Reconstruction

Background and causes of the Civil War and the problems of Reconstruction. (4 units)

356. The United States, 1877-1917

Transformation of the nation between the end of Reconstruction and entrance into World War I. (4 units)

357. The United States, 1917-1945

Principal developments in American life from World War I to the end of World War II. (4 units)

358. United States in World War II

Survey of the diplomatic, military, social, economic and constitutional issues of the United States during World War II. (4 units)

359. The United States Since 1945

Major changes in the United States since the end of World War II. (4 units)

370. History of California

Political, economic, social and cultural development of California from Spanish times to the present. This course meets the state code requirement in state and local government. Formerly History 370A/370B. (4 units)

380. History of World Religions

Historical development of Judaism, Hinduism, Buddhism, Christianity and Islam. (4 units)

382. History of the Middle East

History of the Middle East from the time of Muhammad the Prophet to the modern day. (4 units)

390. History of Modern Mexico

Survey of Mexican history from the nineteenth century wars of independence to the present. (4 units)

391. Chicano History

Mexican-Americans in the United States from the Colonial period to the present, with special emphasis on the Southwest. (4 units)

395. Topics in History

Examination of topics of interest in history. May be repeated for credit as topics change. (4 units)

396. Topics in History

Examination of topics of interest in history. May be repeated for credit as topics change. (2 units)

399. Community Service Project

Credit for performing academically related tasks in such agencies as governmental, social service and educational institutions. May be repeated for a total of four units. No more than four units of credit for community service project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisite: a project proposal must be approved by the department in advance of enrollment.* (Credit to be arranged: 1 or 2 units)

400. Early Medieval Europe

Survey of the political, economic, and social transformation of Europe from the fall of Rome through the eleventh century. (4 units)

401. Late Medieval Europe

Survey of the political, economic, and social transformation of Europe during the high Middle Ages, from the eleventh century to the fourteenth century. (4 units)

402. Renaissance and Reformation

Principal political, economic, intellectual and religious developments in Europe from about 1300 to 1648. (4 units)

403. The Age of Absolutism and Enlightenment

The period from 1648 to 1789, emphasizing the development of the modern state, the new scientific movement and the growth of revolutionary ideas. (4 units)

408. The Development of 20th Century Europe, 1890-1945

Europe from the turn of the century period to the end of World War II. (4 units)

410. Hitler's Europe

Development of totalitarian ideologies focusing primarily on the theory and practice of National Socialism in Germany during the period 1918-1945. (4 units)

421. Economic History of the United States

Economic history of the United States from the founding of the colonies to the present. (Also offered as Economics 421. Students may not receive credit for both.) (4 units)

422. 20th Century Americans

Biographical focus on key American leaders who affected the course of 20th century American history. (4 units)

426. Early Imperial China

Principal political, social, economic, and cultural developments of China from the advent of Confucianism (500 B.C.) to the founding of the Sui Dynasty (A.D. 589). (4 units)

428. Medieval China

Principal political, social, economic, and cultural developments in China from 589-1644. (4 units)

430. China, 1895-Present

Institutions, culture, society, economy and political development of China from the Sino-Japanese War (1894-95) to the present. (4 units)

432. Communist China

Principal political, social, economic, and cultural developments in the People's Republic of China. (4 units)

434. East Asia Since World War II

Principal themes in the histories of Japan, China, Korea, and Vietnam since 1945. (4 units)

440. Japan, 1868-Present

Institutions, culture, society, economy and political development of Japan from the Meiji Restoration to the present. (4 units)

465. Modern Central America

Survey of the political, economic, and social history of the five major Central American nations—Nicaragua, El Salvador, Guatemala, Honduras, and Costa Rica—from their independence in the early 19th century to the present. (4 units)

466. Foreign Relations of Latin America

Survey of the foreign relations of the nations of Latin America with special emphasis on U.S.-Latin American relations. Formerly History 550. (4 units)

469. Colonial Latin America

Survey of Spanish colonial system beginning with discovery of America and continuing to the independence period. (4 units)

470. Modern Latin America

Survey of the development and interaction of modern Latin American institutions in the major nations of Central and South America. (4 units)

480. History of Christianity I

Historical development of early Christianity from its origins to the fall of Rome. (4 units)

481. History of Christianity II

Historical development of Christianity from the fall of Rome to the eve of the Protestant Reformation. (4 units)

490. The Study of History

Introduction to the nature of history through a consideration of the problems of historical knowledge and of the works of major historians of the past. (4 units)

500. Tudor and Stuart England

Principal political, social, economic and religious developments of England from 1485 to 1688. (4 units)

501. Britain, 1688-1901

Principal political, social, economic and religious developments in Britain in the age of revolution and reform, from the Glorious Revolution to the death of Queen Victoria. (4 units)

503. Europe Since 1945

Europe since 1945, emphasizing the evolution of supranational political, economic, diplomatic, and military institutions in the Cold War and post-Cold War eras. (4 units)

509. United States History in the Classroom

Review of United States history from the perspective of the classroom teacher (grades 6 through 12). Identifies teaching strategies for various content areas in United States history. (4 units)

510. Modern France

History of French culture, society, and politics from the fall of Napoleon to the present. (4 units)

513. Women in U.S. History

History of women in the United States from colonial times to the present. Special emphasis on demographic changes, labor, the family, and ethnic and class distinctions among women. (4 units)

520. Tsarist Russia

Principal political, social, economic, and cultural developments in Russia from the Kievan state to the Soviet state, c. 900-1917. (4 units)

521. The Soviet Union

Principal political, social, economic, and cultural developments in the Soviet Union since 1917. (4 units)

535. Studies in European National History

Historical development of individual European nations (for example, Germany, France, Great Britain, Russia, Spain) in the modern period. May be repeated for credit as topics change. (4 units)

540. Constitutional History of the United States

American constitutional development from English and European origins to the present day. This course meets the state code requirement in U.S. history and U.S. Constitution. *Prerequisite: History 200 or 201, or Political Science 410 or consent of instructor.* (4 units)

556. Foreign Relations of the United States

Survey of American foreign policy with special emphasis on America's rise to world power in the 20th century. (4 units)

560. History of the American West

Survey of the western expansion of the American nation. (4 units)

562. History of Southern California

Political, economic, social and cultural development of Southern California from Pre-Columbian times. (4 units)

565. Ethnic Minorities in American History

Historical perspective of the major ethnic groups, their efforts to assimilate and their interaction with American society. (4 units)

566. Ethnic Minorities in the American Southwest: Past and Present

A comparative approach to the historical and contemporary experiences of Chicanos, Indians, Asians and other ethnic minorities in the Southwestern/Western United States. (4 units)

567. The Asian-American Experience

Examination of the immigration and post-immigration experiences of Chinese, Japanese, Filipino, Korean, and Southeast Asian newcomers to the United States since the 1840's. (4 units)

575. Internship in History

Supervised work and study in work situations involving historical skills. May be repeated once for credit. *Prerequisites: major in history; one introductory statistics course; Information Management 220, and Accounting 311; or consent of the department.* (4 units)

589. Revolutions in History

Nature and causes of revolutions from an historical as well as a broad social science perspective; both revolutions and revolutionists from different parts of the world are examined. (4 units)

595. Independent Study

Special topics in historical research. A total of four units in History 595 may be applied toward the history major and eight units in History 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 4 units)

597. Senior Honors Project

Original research in an area of historical studies, culminating in a major research report receiving approval of the history faculty. Enrollment limited to students whose formal application for departmental honors is approved. (5 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Proseminar in History

Survey of the concepts and ideas that historians study, how they approach the study of historical phenomena, and what methods they employ in their analysis. The seminar will include discussion of the relationships of the discipline to other social science disciplines and the unique contributions history has made to knowledge in general and in the social sciences. *Prerequisite: consent of instructor.* (4 units)

603. Seminar in Modern Military History

Analyses of selected military operations since World War II. May be repeated once for credit, as topics change, with consent of student's advisor. (4 units)

HUMAN DEVELOPMENT

Department of Psychology

Physical Sciences Building, Room 219
880-5570

Bachelor of Arts

Human Development
Child Development Track
Gerontology Track
General Track

COORDINATOR: Laura Kamptner

The human development major is an interdisciplinary program of study of the processes and changes that characterize human development.

Three tracks are available for students working toward a Bachelor of Arts in Human Development: child development (which includes an early childhood education option), gerontology, and a general life-span track.

Course offerings are drawn primarily from human development, psychology, sociology, anthropology and biology with electives available from other departments, including education. Consistent with the interdisciplinary field of life-span development, the major provides the important advantage of promoting an holistic and interdisciplinary approach to development that no single discipline can offer. Students selecting the Bachelor of Arts degree in Human Development, with the study of people as its major theme, typically choose careers related to working with people when they graduate, e.g., education, social services, counseling and guidance, or in health delivery settings.

The major also provides academic preparation for graduate-level training in various fields relating to human development, such as psychology, social work, law, and education. Human development majors who are interested in pursuing graduate level training in human or child development, psychology, gerontology, or a related field should plan on taking at least one research methodology course as a part of their degree program.

B.A. IN HUMAN DEVELOPMENT CHILD DEVELOPMENT TRACK

Requirements (85 units)

The child development track is designed to provide students with a solid background in child development that can serve as preparation for occupations or professions that call for child development specialists, e.g., elementary education, early childhood education, infant and toddler specialists, and other positions involving work with young children and their families. This track will also prepare students for graduate level training in related fields. Students selecting this option may also earn the Children's Center Instructional and Supervisory Permits. (See the human development coordinator for details.)

Requirements for the B.A. in Human Development—Child Development Track:

Lower-division requirements (32 units)

1. Biol 100. Topics in Biology (5)
2. Choose one of the following:
 - HD 280. Early Childhood Development (5)
 - Psyc 280. Early Childhood Development (5)
3. HD 281. The Child in the Preschool (6)
4. Psyc 100. Introduction to Psychology (4)
5. Psyc 201. Developmental Psychology (4)
6. Psyc 270. Infant and Toddler Development (4)
7. Soc 100. The Study of Society (4)

Upper-division requirements (37 units)

1. Four units chosen from:
 - Anth 330. Cross-Cultural Child-Rearing Practices (4)
 - Anth 331. Anthropology of Human Development (4)
2. Biol 306. Human Heredity and Development (4)
3. Four units chosen from:
 - ESpe 530. Psychology and Education of Exceptional Individuals (4)
 - Psyc 350. Development of Exceptional Children (4)
 - Psyc 391. Psychopathology of Childhood (4)
4. Four units chosen from:
 - HD 575. Internship (4)
 - HD 585. Student Teaching in Early Childhood Development (4-10)
5. HD 580. Advanced Seminar in Human Development (4)
6. Four units chosen from:
 - Psyc 358. Cognitive Development (4)
 - Psyc 384. Personality and Social Development (4)
7. Four units chosen from:
 - Psyc 303. Parenting and Family Relations (4)
 - Soc 340. Sociology of the Family (4)
8. Psyc 400. Child Assessment (5)
9. Soc 339. Socialization (4)
10. Statistics/Methodology
 - A minimum of four units chosen from:
 - Psyc 210. Psychological Statistics (5)
 - SSci 215. Statistics for the Social Sciences (4)
 - Soc 307. Social Research I (5)
 - Soc 309. Social Research II (5)

Electives (12 units; of which at least eight must be upper-division):

- Anth 330. Cross-Cultural Child-Rearing Practices (4)
- Anth 331. Anthropology of Human Development (4)
- Educ 200. Introduction to Careers in Education (2)
- EEIB 536. Teaching in a Multicultural Society (4)
- ESpe 530. Psychology and Education of Exceptional Individuals (4)
- Eng 320. Children's Literature (4)
- HD 282. Early Childhood Programs (6)
- HD 302. History of Childhood (4)
- HD 303. Theories of Play (4)

- HD 305. Multicultural Child Development (2)
 HD 582. Special Topics in Human Development (1-5)
 HSci 342. Nutrition for Your Health (4)
 HSci 435. Health and Human Development (4)
 HSci 440. Family Health Issues for Educators (2)
 Mus 410. Music in the Elementary Schools (4)
 PSci 450. Political Socialization (4)
 Psyc 303. Parenting and Family Relations (4)
 Psyc 305. Psycholinguistics (4)
 Psyc 311. Introduction to Experimental Psychology (6)
 Psyc 320. Psychology of Middle Childhood (4)
 Psyc 350. Development of Exceptional Children (4)
 Psyc 358. Cognitive Development (4)
 Psyc 384. Personality and Social Development (4)
 Psyc 391. Psychopathology of Childhood (4)
 Psyc 431. Experimental Psychology: Developmental (6)
 Soc 320. The Sociology of Child Abuse (4)
 Soc 340. Sociology of the Family (4)
 Soc 341. Marriage and Family Among Blacks (4)
 Soc 342. The Chicano Family (4)
 Soc 352. Juvenile Offender (4)
 Soc 354. Deviant Behavior (4)
 Soc 410. Racial and Cultural Minorities (4)
 TA 483. Children's Theater (4)

Courses taken as electives may not have been used to satisfy upper-division requirements previously in the major.

B.A. IN HUMAN DEVELOPMENT GERONTOLOGY TRACK

Requirements (85 units)

The gerontology track is designed to prepare graduates for careers related to serving the needs of adults or the elderly, or as preparatory work for graduate level study in related fields. Students selecting this track may also earn a certificate in Applied Gerontology (see Page 292 or a human development advisor for details).

Requirements for the B.A. in Human Development—Gerontology Track:

Lower-division requirements (17 units)

1. Biol 100. Topics in Biology (5)
2. Psyc 100. Introduction to Psychology (4)
3. Psyc 201. Developmental Psychology (4)
4. Soc 100. The Study of Society (4)

Upper-division requirements (52 units)

1. Anth 331. Anthropology of Human Development (4)
2. Biol 306. Human Heredity and Development (4)
3. HD 460. Gerontological Assessment (4)
4. HD 575. Internship (4)
5. HD 580. Advanced Seminar in Human Development (4)
6. HSci 423. Health and Wellness of Older Adults (4)
7. *Four units chosen from:*
 Psyc 303. Parenting and Family Relations (4)
 Soc 340. Sociology of the Family (4)

8. Psyc 329. Psychology of Adulthood and Aging (4)
9. Psyc 358. Cognitive Development (4)
10. Psyc 384. Personality and Social Development (4)
11. *Four units chosen from:*
 Psyc 390. Abnormal Psychology (4)
 Soc 354. Deviant Behavior (4)
12. Soc 330. Social Gerontology (4)
13. Soc 339. Socialization (4)
14. Statistics/Methodology
 A minimum of four units chosen from:
 Psyc 210. Psychological Statistics (5)
 SSci 215. Statistics for the Social Sciences (4)
 Soc 307. Social Research I (5)
 Soc 309. Social Research II (5)

Electives (12 units)

- Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 Biol 314. Biology of Human Sexuality (4)
 HD 582. Special Topics in Human Development (1-5)
 HSci 310. Health and Human Sexuality (4)
 HSci 342. Nutrition for Your Health (4)
 HSci 455. Organization and Management of Long-Term Care Facilities (4)
 HSci 470. Health Behavior (4)
 Psyc 301. Psychology of Human Sexuality (4)
 Psyc 303. Parenting and Family Relations (4)
 Psyc 311. Introduction to Experimental Psychology (6)
 Psyc 331. The Psychology of Women (4)
 Psyc 340. Prejudice, Race, and Racism (4)
 Psyc 345. Cross-Cultural Psychology (4)
 Psyc 390. Abnormal Psychology (4)
 Psyc 431. Experimental Psychology: Developmental (6)
 Soc 340. Sociology of the Family (4)
 Soc 341. Marriage and Family Among Blacks (4)
 Soc 342. The Chicano Family (4)
 Soc 344. Sex Roles: The Life Cycle (4)
 Soc 354. Deviant Behavior (4)
 Soc 410. Racial and Cultural Minorities (4)

Courses taken as electives may not have been used to satisfy upper-division requirements previously in the major.

B.A. IN HUMAN DEVELOPMENT GENERAL TRACK

Requirements (85 units)

This track is designed for students who wish to obtain a broad interdisciplinary background of human development across the life span.

Requirements for the B.A. in Human Development—General Track:

Lower-division requirements (17 units)

1. Biol 100. Topics in Biology (5)
2. Psyc 100. Introduction to Psychology (4)
3. Psyc 201. Developmental Psychology (4)
4. Soc 100. The Study of Society (4)

Upper-division requirements (32 units)

1. Anth 331. Anthropology of Human Development (4)
2. Biol 306. Human Heredity and Development (4)
3. HD 575. Internship (4)
4. HD 580. Advanced Seminar in Human Development (4)
5. *Four units chosen from:*
 - Psyc 303. Parenting and Family Relations (4)
 - Soc 340. Sociology of the Family (4)
6. Psyc 358. Cognitive Development (4)
7. Psyc 384. Personality and Social Development (4)
8. Soc 339. Socialization (4)

A minimum of 12 units chosen from:

- Psyc 320. Psychology of Middle Childhood (4)
- Psyc 270. Infant and Toddler Development (4)
- Psyc 328. Psychology of Adolescent Development (4)

May choose only one of the following:

- HD 280. Early Childhood Development (5)
- Psyc 280. Early Childhood Development (5)

May choose only one of the following:

- Psyc 329. Psychology of Adulthood and Aging (4)
- Soc 330. Social Gerontology (4)

Statistics/Methodology*A minimum of 4 units chosen from:*

- Psyc 210. Psychological Statistics (5)
- SSci 215. Statistics for the Social Sciences (4)
- Soc 307. Social Research I (5)
- Soc 309. Social Research II (5)

Electives (20 units; of which at least sixteen must be upper division):

- Anth 330. Cross-Cultural Child-Rearing Practices (4)
- Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
- Biol 314. Biology of Human Sexuality (4)
- May choose one of the following, if not previously taken:*
 - HD 280. Early Childhood Development (5)
 - Psyc 280. Early Childhood Development (5)
- HD 281. The Child in the Preschool (6)
- HD 282. Early Childhood Programs (6)
- HD 302. History of Childhood (4)
- HD 303. Theories of Play (4)
- HD 305. Multicultural Child Development (2)
- HD 460. Gerontological Assessment (4)
- HD 582. Special Topics in Human Development (1-5)
- HSci 310. Health and Human Sexuality (4)
- HSci 342. Nutrition for Your Health (4)
- HSci 364. Drug and Alcohol Use and Abuse (4)
- HSci 423. Health and Wellness of Older Adults (4)
- HSci 435. Health and Human Development (4)
- HSci 440. Family Health Issues for Educators (2)
- HSci 470. Health Behavior (4)
- PSci 450. Political Socialization (4)
- Psyc 270. Infant and Toddler Development (4)
- Psyc 301. Psychology of Human Sexuality (4)

- Psyc 303. Parenting and Family Relations (4)
- Psyc 305. Psycholinguistics (4)
- Psyc 311. Introduction to Experimental Psychology (6)
- Psyc 320. Psychology of Middle Childhood (4)
- Psyc 328. Psychology of Adolescent Development (4)
- Psyc 329. Psychology of Adulthood and Aging (4)
- Psyc 331. The Psychology of Women (4)
- Psyc 340. Prejudice, Race and Racism (4)
- Psyc 345. Cross-Cultural Psychology (4)
- Psyc 350. Development of Exceptional Children (4)
- Psyc 390. Abnormal Psychology (4)
- Psyc 391. Psychopathology of Childhood (4)
- Psyc 400. Child Assessment (5)
- Psyc 431. Experimental Psychology: Developmental (6)
- Soc 320. The Sociology of Child Abuse (4)
- Soc 330. Social Gerontology (4)
- Soc 340. Sociology of the Family (4)
- Soc 341. Marriage and Family Among Blacks (4)
- Soc 342. The Chicano Family (4)
- Soc 344. Sex Roles: The Life Cycle (4)
- Soc 352. Juvenile Offender (4)
- Soc 354. Deviant Behavior (4)
- Soc 410. Racial and Cultural Minorities (4)

Courses taken as electives may not have been used to satisfy upper-division requirements previously in the major.

Note: Occasionally topic and seminar courses are offered in various disciplines throughout the university that would be relevant for human development majors. Students interested in receiving elective credit toward the major for these courses should contact the coordinator of the human development program.

COURSE OFFERINGS IN HUMAN DEVELOPMENT (HD)

Lower Division**280. Early Childhood Development**

Physical, social, emotional, and intellectual development of the young child from ages two to five. Laboratory involves observation of young children. Four hours lecture and three hours laboratory. (Also offered as Psychology 280. Students may not receive credit for both.) *Prerequisite:* Psychology 100. (5 units)

281. The Child in the Preschool

Child development theories and their implications for communicating and interacting with young children, for guiding child behavior, and for designing early childhood settings. Laboratory involves supervised experience in child development setting. Four hours lecture and six hours laboratory. *Prerequisite:* Human Development 280 or Psychology 280. (6 units)

282. Early Childhood Programs

Methods, materials, and activities in early childhood education. Laboratory involves planning, implementing, and evaluating curriculum activities in a preschool setting. Four hours lecture and six hours laboratory. *Prerequisite: Human Development 281.* (6 units)

Upper Division

302. History of Childhood

Historical survey of childhood within the contexts of family and society. (4 units)

303. Theories of Play

Interdisciplinary survey of theories of play and their applications to child development. *Prerequisite: Human Development 280 or Psychology 280.* (4 units)

305. Multicultural Child Development

Theory and applications of cultural and ethnic diversity for early childhood settings. *Prerequisite: Human Development 280 or Psychology 280.* (2 units)

460. Gerontological Assessment

Theory, issues, and procedures in assessment of physical, cognitive, social, and emotional functioning in late adulthood. *Prerequisites: Health Science 423, Psychology 329, Sociology 330 and Psychology 210 (or equivalent).* (4 units)

575. Internship

Supervised work and study in private and public organizations. May be repeated once for credit. (Only four units may be applied to upper-division credit in the Human Development major.) Graded credit/no credit. *Prerequisites: consent of instructor and department.* (4 units)

580. Advanced Seminar in Human Development

Theory and research on physical, social, psychological and cultural aspects of human development from an interdisciplinary perspective. *Prerequisites: senior standing, 12 units of course work in human growth and development, and consent of instructor.* (4 units)

582. Special Topics in Human Development

An intensive study of selected topics related to human development. May be repeated for credit as topics change. *Prerequisite: upper-division or graduate standing.* (Credit to be arranged: 1 to 5 units)

585. Student Teaching in Early Childhood Education

Supervised teaching in early childhood education programs. Graded credit/no credit. *Prerequisites: Human Development 282, consent of instructor and department.* (Credit to be arranged: 4 to 10 units)

HUMAN SERVICES

Department of Sociology

Faculty Office Building, Room 123
880-5541

Bachelor of Arts

Human Services

COORDINATOR: Randi Miller

Human services is an interdisciplinary, career-oriented degree program drawing from sociology, psychology, ethnic studies and health science. It is particularly suited to the paraprofessional person whose work role is that of a generalist who must serve in a variety of work settings and deal with a variety of human needs. Consequently, courses have been selected and designed to meet minimum general occupational needs of human services personnel.

B.A. IN HUMAN SERVICES

Requirements (73 units)

Requirements for the B.A. in Human Services:

Lower-division requirements (13 units)

1. HSci 120. Health and Society: An Ecological Approach (5)
2. Psyc 100. Introduction to Psychology (4)
3. Soc 100. The Study of Society (4)

Human Development and Behavior (20 units)

1. Psyc 201. Developmental Psychology (4)
2. Psyc 390. Abnormal Psychology (4)
3. Soc 340. Sociology of the Family (4)
4. Soc 354. Deviant Behavior (4)
5. *Four units chosen from:*
 - Soc 410. Racial and Cultural Minorities (4)
 - Psyc 345. Cross-Cultural Psychology (4)

Delivery of Human Services (8 units)

1. *Four units chosen from:*
 - HSci 371. Community Health Services (4)
 - Psyc 387. Community Psychology (4)
2. Soc 434. Community Organization (4)

Human Services Practice (16 units)

1. *Sixteen units chosen from:*
 - Anth 330. Cross-Cultural Child-Rearing Practices (4)
 - HSci 301. Principles of Health Education for Health Educators (4)
 - HSci 342. Nutrition for Your Health (4)
 - HSci 364. Drug and Alcohol Use and Abuse (4)
 - HSci 404. Women's Health Issues (4)
 - HSci 423. Health and Wellness of Older Adults (4)
 - HSci 440. Family Health Issues for Educators (2)
 - HSci 470. Health Behavior and Community Health Education (4)
 - HSci 489. Pre-Field Study Practicum (2)
 - Psyc 329. Psychology of Adulthood and Aging (4)

- Psyc 331. The Psychology of Women (4)
- Psyc 333. Drugs and Behavior (4)
- Psyc 351. Behavior Modification: Principles and Applications (4)
- Psyc 391. Psychopathology of Childhood (4)
- Soc 318. Social Welfare Policies and Services (4)
- Soc 320. The Sociology of Child Abuse (4)
- Soc 330. Social Gerontology (4)
- Soc 344. Sex Roles: The Life Cycle (4)
- Soc 352. Juvenile Offender (4)
- Soc 355. Medical Sociology (4)
- Soc 356. Sociology of Mental Illness (4)

Practice Methods (4 units)

1. *Four units chosen from:*
 - Psyc 315. Communication Processes (4)
 - Soc 484. Social Casework (4)

Research Skills (4 units)

1. *A minimum of four units chosen from (the following courses require a prerequisite):*
 - HSci 525. Health Data Analysis and Demography (4)
 - HSci 598. Research Methodology in Health Science (4)
 - Psyc 311. Introduction to Experimental Psychology (6)
 - Soc 309. Social Research II (5)

Internship/Field Study (8 units)

A two quarter sequence of internship to be selected in consultation with an advisor to correspond with previous course work and career goals.

Note: All internship/field study units must be taken in the same department.

1. *A minimum eight units chosen from:*
 - A. HSci 492A. Field Study: Action/Research in Human Ecology and Health (5)
 - HSci 492B. Field Study: Action/Research in Human Ecology and Health (5)
 - B. Psyc 575. Internship in Psychology (4) for a total of (8)
 - C. Soc 575. Internship in Sociology and Social Work (5) for a total of (10)

HONORS IN THE MAJOR

Students majoring in human services are eligible to receive honors in human services at graduation if the following conditions are met:

1. At least one-half of the course work required by the major is completed at this university;
2. At least a 3.5 GPA in the major, both at this university and overall;
3. An overall undergraduate GPA of 3.0 ("B") or better;
4. Completion of a senior project approved in advance by the program coordinator.

Students interested in receiving this recognition must initiate the process by making a formal application with the Sociology Department.

HUMANITIES

School of Humanities

University Hall, Room 237

880-5800 or

University Hall, Room 339

880-5869

The university offers courses of an interdisciplinary nature, but no degree program under the humanities designation.

COURSE OFFERINGS IN HUMANITIES (Hum)

Lower Division

180. The Art of Film

Developing critical appreciation of film as a mode of artistic expression. Explores creative applications of photography, literature, performance, music and scripting through screening of films ranging from productions of major studios to works of avant-garde artists. (4 units)

Upper Division

312. Theories of Language Acquisition and Learning

An examination of the linguistic, psychological and social aspects of first and second language acquisition, second dialect learning and learning theories. *Prerequisite: English 311.* (4 units)

319. Myth, Metaphor and Symbol

Nature and function of myth and mythmaking; ways in which figurative language is used in different disciplines to create models for understanding the world and human experience. *Prerequisite: junior or senior standing.* (4 units)

325. Perspectives on Gender

This interdisciplinary course uses scientific, humanistic and social science perspectives to foster an understanding of how gender roles in Western culture are established, maintained and changed. (Also offered as Social Sciences 325 and Natural Sciences 325. Students may receive credit for only one of these courses.) *Prerequisite: junior or senior standing.* (4 units)

330. Arts and Ideas

An interdisciplinary exploration of several ways in which different arts exhibit ideas and various ideas stimulate our understanding of and pleasure in the arts. *Prerequisite: junior or senior standing.* (4 units)

335. The Origin and Contemporary Role of Latino Culture

An exploration of the birth of Latino culture in Spain and its continued development in Latin America and the United States as seen in literature, art, music, and philosophy. *Prerequisite: junior or senior standing.* (4 units)

340. Interpretation and Values

Investigation of different ways in which people find the meaning, or meanings, in texts or events. Alternative theoretical approaches applied to specific literary, artistic, legal, religious and historical examples. *Prerequisite: junior or senior standing.* (4 units)

344. Ideas in American Culture

An examination of recurring ideas in American culture, from Colonial times to the present, as seen in literature, art and thought. *Prerequisite: junior or senior standing.* (4 units)

360. Cultures of the East

An interdisciplinary introduction to the cultural heritage of the nonwestern world as reflected in art, architecture, theatre, literature and music. (4 units)

380. Comparative Studies in the Arts and Literature of Western and Non-Western Cultures

Comparison of aspects of music, art, theatre and literature in Western and non-Western societies. *Prerequisite: junior or senior standing.* (4 units)

385. A Cultural History of Fashion

The history of clothing and its relation to other arts as a form of self-expression within shifting socio-cultural circumstances. *Prerequisite: junior or senior standing.* (4 units)

460. Cultural Studies

Aspects of culture, language and civilization of selected ethnic groups within the United States and their contributions to American society; special attention to gender issues. (4 units)

495. Expository Writing for the Humanities

Writing related to the humanities including documented research reports, summaries and analytical papers. Revision and rewriting will be required. Course fulfills the graduation requirement in writing proficiency. No more than one of the expository writing courses (Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, Social Sciences 495) may be taken for credit. Students who have received a grade of no credit in any combination of the expository writing courses two or more times must meet with the 495 coordinator or designee to design a developmental writing plan as a condition for enrolling for a third quarter. All students must obtain junior status at the time of registration or their course request will be cancelled. Graded A, B, C/ No credit. *Prerequisites: English 101 and a minimum of 90 quarter (60 semester) units of college credit.* (4 units)

496. Selected Topics in Humanities

Seminar in special topics chosen from arts or humanities. May be repeated for credit as topics change. (4 units)

499. Methods and Materials in the Teaching of Humanities

Integration of educational philosophy and pedagogical concepts with the specific teaching materials of disciplines in the humanities. This course may not be counted toward fulfilling requirements of courses in the majors below. May be repeated for credit as topics change. *Prerequisites: Education 332, senior or graduate standing and admission to the single subject credential program.*

- A. Art (4 units)
- B. Foreign Languages (4 units)
- C. English (4 units)
- D. Music (4 units)
- E. Theatre Arts (4 units)
- F. Humanities (4 units)

575. Internship in Service Learning

Supervised intensive work that requires advanced skills in the humanities in private or public organizations. Generally assumes 30 hours of work/study per unit of credit. A total of eight units may be applied toward graduation. Graded credit/no credit. *Prerequisite: one upper-division course in the humanities in the field in which the student will be working or equivalent or consent of instructor. (Credit to be arranged: 2 to 5 units)*

Graduate/Postbaccalaureate

May not be taken by undergraduate students

695. Directed Graduate Studies

Graduate-level independent study under the direct supervision of a faculty member from the student's committee and, if an interdisciplinary studies major, with approval of the committee on graduate education and consent of dean of graduate studies. (Credit to be arranged: 1 to 6 units)

699. Thesis

Preparation of Master of Arts thesis under the direction of a faculty member approved by the committee on graduate education. Maximum nine credits applicable toward the Master of Arts, with a special major. *Prerequisite: advancement to candidacy. (Credit to be arranged: 1 to 5 units)*

INFORMATION MANAGEMENT

Department of Information and Decision Sciences

Jack Brown Hall, Room 460
880-5723

FACULTY: Yasha Karant, Frank Lin, Bryan Pettit, Tapie Rohm (Chair), Conrad Shayo, Walt Stewart, Bob Wilson

The university offers concentrations in information management within the Bachelor of Arts in Administration, the Bachelor of Science in Administration and the Master of Business Administration. A Certificate in Information Management is also available. The details of these programs are listed under Administration on Page 75. The Master of Business Administration can be found on Page 330. The courses listed below are offered in support of these programs. Further information is available from the Department of Information and Decision Sciences.

COURSE OFFERINGS IN INFORMATION MANAGEMENT (Info)

Lower Division

101. Introduction to Information Technology

An introduction to information technology concepts and skills. A survey of current computer systems, their use in organizations, and attending ethical issues. An introduction to popular software applications (word processing, spreadsheets, databases, and Internet). No prior computer experience necessary. Formerly Information Management 220. Three hours lecture and two hours activity laboratory. (4 units)

282. Business Systems I

A comparison of introductory business system software in the developmental stages. Emphasizes the business software structures of various high level languages. Knowledge of computer programming is essential. *Prerequisites:* Computer Science 125, 140, 201, 250 or consent of instructor. (4 units)

283. Business Systems II

A comparison of advanced business system software in the developmental stages. Emphasizes the business software structures of high level languages. Knowledge of computer programming is essential. *Prerequisite:* Information Management 282 or consent of instructor. (4 units)

Upper Division

Enrollment in upper division courses restricted to students who have met all prerequisites and have completed at least 89.9 quarter units (junior class level). Students who do not meet these requirements will be disenrolled.

309. Information Management

Application of computer systems in organizations. Covers the topics of information systems planning, information forecasting, information technology and information processing. *Prerequisite:* Information Management 101. (4 units)

471. Information Systems Planning

Analysis of an organization's information systems needs. Information systems needs are developed according to the mission, goals, objectives and business plans. *Prerequisites:* Information Management 309 and Management 302 or Psychology 302. (4 units)

472. Information Technology

Study of the hardware and software necessary to have a complete information system. Topics include distributed data systems, personal computers, data terminal devices, communication media, networking, operating systems and software needs. *Prerequisites:* Information Management 309 and 471. (4 units)

473. Information Forecasting

Analysis of computerized forecasting techniques for accounting, finance, statistics and quantitative methods. *Prerequisites:* Accounting 212 (or 312), Finance 313, Information Management 309, Management Science 210 and 304. (4 units)

474. Data Base Management

Treatment of the use of information retrieval and storage techniques. Includes sequential and random files organization, on-line systems and the application of data base programs. *Prerequisites:* Information Management 309 and 472. (4 units)

475. Information Networking

An introduction to the data communication field for the business student. Covers the introductory topics of hardware, software, protocols, channels, modems, local area networks, wide area networks and various applications. *Prerequisite:* Information Management 309 or consent of instructor. (4 units)

476. Systems Analysis and Design

Analysis and design specifications of an organization; topics include flow charting, programming, interviewing, data flows, systems specifications and management involvement. *Prerequisites:* Information Management 309, 471, 472; Computer Science 140 or 201. (4 units)

477. Decision Support Systems

Analysis of executive information systems; topics include the strategy, framework, design, implementation and evaluation of decision-support systems. *Prerequisites:* Information Management 309 and 476. (4 units)

478. Information Problem Solving

Structured approaches to complex problem solving techniques; topics include cybernetics, frame analysis, synetics, brainstorming and similar techniques. *Prerequisite: Information Management 309.* (4 units)

479. Studies in Information Management

Research and discussion of current topics, problems, research, employment opportunities, and developments in the computer and information management fields. *Prerequisite: Information Management 309.* (4 units)

481. Information Processing

Analysis of text editing, word processing, graphics and report generation in the office information systems. Emphasis is placed on adapting software packages to various computer systems. *Prerequisite: Information Management 309.* (4 units)

484. Expert Systems

An introduction to the concepts and techniques of expert systems. Covers the topics of artificial intelligence languages, developing systems and the market place. *Prerequisite: Information Management 309 or consent of instructor.* (4 units)

490. Information Policies and Strategies

Topics are explored by utilizing skills and techniques developed in previous course work. Students are advised to take this course near the end of their program. *Prerequisites: Information Management Core.* (4 units)

575. Internship in Information Management

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Information Management

An intensive study of some phase of information management to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

INTERDISCIPLINARY STUDIES

The university offers a limited number of courses outside of its department and school structure.

Also offered as interdisciplinary studies are the certificate programs in international relations and bilingual/cross-cultural studies. See Pages 273 and 105.

COURSE OFFERINGS IN INTERDISCIPLINARY STUDIES (IS)

Lower Division

101. Words and Ideas

A course combining English 101. Freshman Composition and Philosophy 105. Critical Thinking Through Argument Analysis. Students must complete Interdisciplinary Studies 101A and Interdisciplinary Studies 101B before credit can be granted for either. Interdisciplinary Studies 101A must be taken before Interdisciplinary Studies 101B. *Prerequisite: satisfactory score on the English Placement Test, or completion of the test and at least a grade of "C" in English 85 or 95.*

A. (4 units)

B. (4 units)

Upper Division

460. Aspects of Chicano Culture

Cultural, political and social values of the Chicano as reflected in Chicano literature, art, music, teatro and other forms and their relationship to concurrent developments in Mexico.

(4 units)

LIBERAL STUDIES

Liberal Studies Office

University Hall, Room 018

880-5857

Liberal Studies Peer Advising Center (PALS)

880-5482

Bachelor of Arts

Liberal Studies

Liberal Studies - Bilingual/Cross-Cultural

Studies Emphasis

American Studies (Track II)

(Degree requirements can be found on Page 86)

Teaching Credential Program

Liberal Studies - Multiple Subject

COORDINATOR: Daniel S. Whitaker

The Bachelor of Arts in Liberal Studies is a multidisciplinary degree program designed for students whose needs or interests require a more broadly based liberal arts curriculum than is possible through existing disciplines. (By completing the liberal studies program, students also fulfill the general education requirements of the university.) While the program is configured for students who plan to become elementary-school teachers, it is open to everyone. In fact, the program contains optional courses for students who do not plan to seek a credential.

The liberal studies program has been approved by the Commission for Teacher Credentialing; students who complete the program for elementary-school teachers are granted a waiver of the N.T.E. examination requirement for the multiple subjects teaching credential.

The liberal studies program also contains a track for students who want a bilingual/cross-cultural emphasis in Spanish. Information on this track is available on Page 216.

Track II of the American Studies major also fulfills the requirements of the Liberal Studies major. Like the Liberal Studies major, it contains options for credential and non-credential candidates. Information on this track is available on page 86.

Note: Credential candidate students who are currently under a catalog year of 1988-1989 or earlier must complete all old requirements before June, 1996, or they will be held to the requirements of the current Liberal Studies major.

B.A. IN LIBERAL STUDIES

Requirements (154 units Noncredential
Students/160 units Credential Candidates)

BASIC PROGRAM (134 units/142 units)

- A. Language Arts (28 units)
- B. Humanities and the Arts (32 units)
- C. Mathematics and Natural Sciences (32 units/36 units)
- D. Social and Behavioral Sciences (32 units)
- E. Lifelong Understanding (6 units/10 units)
- F. Multicultural/Gender Category
- G. General Education Elective Options (4 units)

FIELD OF CONCENTRATION (20 units/18 units)

- H. Concentrations (See the list of approved fields under category H below.)

LIBERAL STUDIES TOTAL (154 units/160 units)

All liberal studies students should give special attention to the following points before they begin their course work:

1. Since the liberal studies program contains a variety of choices, students should seek advisement as early as possible at the Liberal Studies Peer Advising Center (PALS), University Hall, Room 018.
2. By completing the liberal studies program, students also can fulfill the general education requirements of the university;
3. A course only can be counted once within the liberal studies program; for example, a course taken in the concentration, category H, cannot be taken in a breadth area, categories A through D;
4. The liberal studies program is designed both for students who wish to enter elementary-school teaching (*credential candidates*) and for those who are not seeking a teaching credential but still want a broad undergraduate education (*noncredential students*). Students who do not wish to enter elementary-school teaching should notice the special options that are provided for them below;
5. With advisement and a careful selection of courses, students can also:
 - A. Complete a second major in certain fields;
 - B. Complete the requirements leading to a multiple subject teaching credential. See "Basic Teaching Credentials" in this catalog, Page 138;
6. Students who select the bilingual/cross-cultural track should consult carefully its prefatory remarks.

The basic program in liberal studies is divided into four breadth areas, categories A through D. For noncredential students, a 2.0 ("C") grade point average must be maintained in these areas. Credential candidates who do not maintain an overall grade point average of 2.89 will need to pass subject matter competency assessment prior to Student Teaching. Generally, courses taken in categories F and G will be counted under categories A through D or category H. Within categories A through E, the course work is subdivided further into courses in required sections and electives. Sections throughout the basic program that also meet general education requirements are marked "G.E."

Note: No one course may be counted in more than one category.

Requirements for the B.A. in Liberal Studies:

A. Language Arts (28 units)

- Written Communication (G.E.):
Eng 101. Freshman Composition (4)
- Upper-division Writing Requirement (G.E.):
(*Liberal Studies recommends English 495. Expository Writing; but any of the following courses qualifies*) four units chosen from:
Educ 495. Expository Writing for Education (4)
Eng 495. Expository Writing (4)
Hum 495. Expository Writing for the Humanities (4)
Mgmt 495. Expository Writing for Administration (4)
NSci 495. Expository Writing for the Natural Sciences (4)
SSci 495. Expository Writing for the Social Sciences (4)

Note: This requirement also can be met by passing a proficiency examination. Students who pass the examination will be required instead to take four units of upper-division general education course work from among those courses listed under the General Education Elective Options, see category G.

- Oral Communication (G.E.)
Comm 120. Oral Communication (4)
- Literature (G.E.)
Four units chosen from:
Eng 110. World Literature I (4)
Eng 111. World Literature II (4)
Eng 160. World Drama (4)
Eng 170. Studies in Literature (4)
TA 160. World Drama (4)
TA 212. Oral Interpretation of Literature (4)
- Development of Language
 - Credential candidates, four units as follows:*
Eng 311. The English Language (4)
 - Noncredential students, four units chosen from:*
Eng 311. The English Language (4)
Fren 306. French Linguistics (4)
Phil 484. Philosophy of Language (4)
Span 415. Comparative Linguistics: Spanish/English (4)

- Analysis of Literature
Four units chosen from:
Eng 301. Analysis of Poetry (4)
Eng 302. Analysis of Drama (4)
Eng 303. Analysis of Prose Fiction (4)
TA 302. Analysis of Drama (4)

7. Upper-division elective

Note: A course counted under categories A5 or A6 cannot be counted under category A7.

- Four units chosen from:*
Eng 301. Analysis of Poetry (4)
Eng 302. Analysis of Drama (4)
Eng 303. Analysis of Prose Fiction (4)
Eng 311. The English Language (4)
Eng 314. American Indian Literature (4)

- Eng 317. Introduction to Creative Writing: Poetry (4)
Eng 318. Introduction to Creative Writing: Fiction (4)
Eng 320. Children's Literature (4)
Eng 322. Studies in Literary Themes, Genres, or Authors (4)
Eng 327. Literature for Adolescents and Young Adults (4)
Eng 330. American Literature I (4)
Eng 331. American Literature II (4)
Eng 332. American Literature III (4)
Eng 333. Myth and Epic (4)
Eng 335. Studies in the Novel (4)
Eng 339. African American Literature (4)
Eng 401. English Literature of the Middle Ages (4)
Eng 403. English Literature of the Renaissance (4)
Eng 406. Seventeenth Century Literature (4)
Eng 409. English Literature of the Restoration and Eighteenth Century (4)
Eng 412. Romantic Prose and Poetry (4)
Eng 415. Victorian Literature (4)
Eng 442. Modern Poetry (4)
Eng 446. Modern Fiction (4)
Eng 450. Classical Drama (4)
Eng 455. Modern Drama I (4)
Eng 456. Modern Drama II (4)
Eng 475. Shakespeare I (4)
Eng 476. Shakespeare II (4)
Eng 513. Advanced Creative Writing (4)
Eng 515. Senior Seminar in Literature (4)
Eng 565. Special Studies in Writing (2)
Eng 566. Special Studies in Writing (4)
Hum 312. Theories of Language Acquisition and Learning (4)
TA 302. Analysis of Drama (4)
TA 450. Classical Drama (4)
TA 455. Modern Drama I (4)
TA 456. Modern Drama II (4)
TA 475. Shakespeare I (4)
TA 476. Shakespeare II (4)

B. Humanities and the Arts Breadth Area (32 units)

- Critical Thinking (G.E.)
Four units chosen from:
Comm 180. Critical Thinking Through Argumentation (4)
Math 180. Critical Thinking Through Problem Solving (4)
Phil 105. Critical Thinking Through Argument Analysis (4)
Phil 205. Critical Thinking Through Symbolic Logic (4)
Psyc 105. Critical Thinking Through Problems Analysis (4)
Soc 180. Critical Thinking About Social Problems (4)
- Philosophy (G.E.)
Four units chosen from:
Phil 190. Introduction to Philosophical Issues (4)
Phil 191. Introduction to Values, Technology and Society (4)

- Phil 192. Introduction to Philosophy of Religion (4)
 Phil 193. Introduction to Eastern Philosophy (4)
 Phil 194. Introduction to Knowledge and Reality (4)
3. Foreign Language (G.E.)
Four units chosen from:
- Flan 150. Independent Intermediate Language Study (4)
 Fren 150. Intermediate French (4)
 Fren 212. Composition (4)
 Fren 214. Conversation (4)
 Fren 216. Introduction to Literary Texts (4)
 Ger 150. Intermediate German (4)
 Ger 212. Composition (4)
 Ger 214. Conversation (4)
 Ger 216. Introduction to Literary Texts (4)
 Span 150. Intermediate Spanish (4)
 Span 155. Intermediate Spanish for Spanish Speakers (4)
 Span 212. Composition (4)
 Span 214. Conversation (4)
 Span 216. Introduction to Literary Texts (4)
- Note:** Students pursuing the B.A. in Liberal Studies cannot include in category B3 the following courses:
- Fren 290. French Literature in English
 Ger 290. German Literature in English
 Span 290. Spanish and Latin American Literature in English
4. Arts
- a. *Four units in the arts (G.E.) chosen from:*
- Art 200. Studies in Art (4)
 Mus 180. Studies in Music (4)
 TA 260. Introduction to Theatre (4)
- b. *A minimum of eight units, at least six units upper-division, in arts activity/arts in the classroom selected from the two disciplines not studied in section a (students choosing Theatre Arts 260 in section a cannot use Dance courses in section b) and chosen from:*
- Art 211. Visual Composition and Perception (2.5)
 Art 212. Color and Light (5)
 Art 213. Form in Space and Time (2.5)
 Art 214. Methods and Materials (2.5)
 Art 215. Basic Drawing (2.5)
 Art 216. Life Drawing (2.5)
 Art 335. Painting I (5)
 Art 354. Ceramics I (5)
 Art 368. Woodworking and Furniture Design I (5)
 Art 375. Glass (5)
 Art 380. Communications Design I (5)
 Art 390. Beginning Photography (5)
 Art 395. Art in the Classroom (4)
 Dan 200. Studies in Dance (2)
 Dan 300. Dance Technique (2)
 Dan 481. Creative Dance in the Classroom (4) (if not taken in category E.3.b.)
 Mus 205A. Class Guitar (1)
 Mus 206. Class Voice (1)
 Mus 216. Class Recorder I (1)
 Mus 217. Class Recorder II (1)
 Mus 220. Class Piano I (1)
 Mus 221. Class Piano II (1)
 Mus 222. Class Piano III (1)
 Mus 380. Chamber Orchestra (1)
 Mus 381. Wind Ensemble (1)
 Mus 385. Concert Choir (1)
 Mus 391. Jazz Ensemble (1)
 Mus 410. Music in the Elementary Schools (4)
 Mus 516. Teaching Recorder in the Elementary School I (2)
 Mus 517. Teaching Recorder in the Elementary School II (2)
 Mus 531. Musical Development for the Elementary Teacher (4)
 Mus 550. Music in the Elementary Classroom (4)
 Mus 570. Music Creativity for the Elementary Classroom (2)
 TA 235. Fundamentals of Stage Design (4)
 TA 251. Acting I (3)
 TA 252. Acting II (3)
 TA 320A. Theatre Practicum: Performance (2)
 TA 320B. Theatre Practicum: Imagination Players (2)
 TA 320C. Theatre Practicum: Touring Theatre (2)
 TA 320E. Theatre Practicum: Special Production (2)
 TA 337. Design: Costume Design (3)
 TA 385. Acting for Non-Majors (4)
 TA 481. Creative Drama in the Classroom (4)
 TA 483. Children's Theatre (4)
 TA 484. Readers Theatre in the Classroom (4)
5. Electives in Humanities
Four units chosen from groups 1 or 2 below:
1. *Four units in upper-division courses chosen from: communication, humanities, philosophy and foreign languages and literatures (including French, German, Spanish and other languages, and foreign languages and literatures taught in English);*
2. *Four units in upper-division courses chosen from: courses in art history and music history.*
6. Integrative Capstone in the Humanities (G.E.)
Four units chosen from:
- Hum 319. Myth, Metaphor and Symbol (4)
 Hum 325. Perspectives on Gender (meets the requirement in category F1.) (4)
 Hum 330. Arts and Ideas (4)
 Hum 335. The Origin and Contemporary Role of Latino Culture (meets the requirement in category F1.) (4)
 Hum 340. Interpretation and Values (4)
 Hum 344. Ideas in American Culture (4)
 Hum 380. Comparative Studies in the Arts and Literature of Western and Non-Western Cultures (4)
 Hum 385. A Cultural History of Fashion (4)

Note: Students can receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender
- NSci 325. Perspectives on Gender
- SSci 325. Perspectives on Gender

C. Mathematics and Natural Sciences Breadth Area (32 units/36 units)

1. Mathematics (G.E.)

Four units chosen from:

- Math 110. College Algebra (4)
- Math 115. The Ideas of Mathematics (4)
- Math 120. Pre-Calculus Mathematics (4)
- Math 192. Methods of Calculus (4)
- Math 211. Basic Concepts of Calculus (4)

2. Mathematical Applications

Four units chosen from:

- Math 211. Basic Concepts of Calculus (4)
- Math 212. Calculus II (4)
- Math 302. Problem Solving in Mathematics (4)

Note: Math 211. Basic Concepts of Calculus may not be taken for credit by students who have received credit for this course in category C1.

3. Life Science (G.E.)

Five units chosen from:

- Biol 100. Topics in Biology (5)
- Biol 200. Biology of the Cell (5)
- Biol 250. Biology of Ecosystems (5)
- HSci 120. Health and Society: An Ecological Approach (5)

4. Physical and Earth Sciences

A. *Noncredential students, a minimum of five units chosen from:*

- Chem 100. Chemistry in the Modern World (5)
- Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
- Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
- Geog 103. Physical Geography (5)
- Geol 101. Physical Geology (5)
- Phys 100. Physics in the Modern World (5)
- Phys 103. Descriptive Astronomy (5)
- Phys 121. Basic Concepts of Physics (5)
- Phys 221. General Physics (5)

B. *Credential candidates, (nine units) one of the following three course sequences (1, 2 or 3) to include one course in each of the physical sciences (physics and chemistry) and earth/space sciences (geology, geography and astronomy).*

1. a. *One of the following:*

- Chem 100. Chemistry in the Modern World (5)
- Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
- Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)

- b. Geol 304. Geology in the Classroom (2)
- c. Phys 304. Physics in the Classroom (2)

2. a. *One of the following:*

- Phys 100. Physics in the Modern World (5)
- Phys 121. Basic Concepts of Physics (5)
- Phys 221. General Physics (5)
- b. Chem 304. Chemistry in the Classroom (2)
- c. Geol 304. Geology in the Classroom (2)

3. a. *One of the following:*

- Geog 103. Physical Geography (5)
- Geol 101. Physical Geology (5)
- Phys 103. Descriptive Astronomy (5)
- b. Chem 304. Chemistry in the Classroom (2)
- c. Phys 304. Physics in the Classroom (2)

5. Special Topics in Science and Technology (G.E.)

Two units chosen from:

- Biol 216. Genetics and Society (2)
- Biol 217. Biology of Sexually Transmitted Diseases (2)
- Chem 105. Chemicals in Our Environment (2)

6. Mathematics and Natural Sciences Electives

a. *Credential candidates, eight units as follows:*

- CSci 127. Introduction to Computer Technology for Educators (4)
- Math 301. Basic Mathematics for Educators (4)

b. *Noncredential students, eight units, at least four units must be upper-division, chosen from: biology, chemistry, computer science, geology, health science, mathematics, natural sciences or physics courses. At least two units must be chosen from:*

- CSci 121. Computer Technology and People (2)
- CSci 124. Exploring the Information Superhighway (2)
- CSci 127. Introduction to Computer Technology for Educators (4)

Note: The following courses can be used to satisfy only one category and students cannot receive credit for both:

- CSci 121. Computer Technology and People
- and
- CSci 127. Introduction to Computer Technology for Educators

7. Integrative Capstone in the Natural Sciences (G.E.)

Four units chosen from:

- NSci 300. Science and Technology (4)
- NSci 310. The Environment and Human Survival (4)
- NSci 312. Scientific Contributions to the Development of Civilization (4)
- NSci 314. Life in the Cosmos (4)
- NSci 320. Energy (4)
- NSci 325. Perspectives on Gender (Meets the requirement in category F1.) (4)
- NSci 351. Health and Human Ecology (4)
- NSci 360. Legacy of Life (4)

Note: Students may receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender
- NSci 325. Perspectives on Gender
- SSci 325. Perspectives on Gender

D. Social and Behavioral Sciences Breadth Area (32 units)

1. American History and Civilization (G.E.)

Four units chosen from:

- Hist 146. American Civilization (4)
- Hist 200. United States History to 1877 (4)
- Hist 201. United States History 1877 to the Present (4)

2. American Institutions (G.E.)

- PSci 203. American Government (4)

Note: The American History, Constitution, State and Local Government requirement can be met by taking Political Science 203 and either History 146, 200, or 201. However, even if this requirement is met by examination, students must still take eight units of lower-division course work chosen from categories D3 and D4 and counted in categories D1 through D2.

3. World Cultures (G.E.)

Four units chosen from:

- Anth 140. World Civilizations I, the Rise of Civilization (4)
- Hist 140. World Civilizations I, the Rise of Civilization (4)
- Hist 142. World Civilizations II, the Civilizations of the East and the West (4)
- Hist 144. World Civilizations III, the Expansion of Europe (4)
- SSci 165. Regions and Peoples of the World (4)

4. Discipline Perspectives (G.E.)

Four units chosen from:

- Anth 100. Introduction to Anthropology: Human Evolution (4)
- Anth 102. Introduction to Anthropology: Culture and Society (4)
- Econ 104. Economics of Social Issues (4)
- ES 100. Ethnicity and Race in America (4)
- Geog 100. Introduction to Human Geography (4)
- PSci 100. Introduction to Political Science (4)
- Psc 100. Introduction to Psychology (4)
- Soc 100. The Study of Society (4)

5. Social Science Electives

a. Credential candidates, twelve units as follows:

1. Psc 320. Psychology of Middle Childhood (4)
2. Eight units, at least four units must be upper-division, chosen from anthropology, criminal justice, economics, geography, history, political science, psychology, social sciences, sociology and women's studies.

b. Noncredential students, twelve units, at least four units must be upper-division, chosen from: anthropology, criminal justice, economics, geography, history, political science, psychology, social sciences, sociology and women's studies.

6. Integrative Capstone in the Social and Behavioral Sciences (G.E.)

Four units chosen from:

- SSci 300. Nonwestern World (4)
- SSci 304. Contemporary Latin America (4)

- SSci 315. Cultural Adaptation: The Quest for Survival (4)

- SSci 316. Race and Racism (meets the requirement in category F1.) (4)

- SSci 320. Understanding Capitalism (4)

- SSci 321. Urbanization and the Urban Environment (4)

- SSci 325. Perspectives on Gender (meets the requirement in category F1.) (4)

- SSci 343. Understanding Socialism (4)

- SSci 345. Religious Expression in America (4)

- SSci 350. Roots of Modern Racism in America (4) (meets the requirement in Category F1.)

Note: Students may receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender

- NSci 325. Perspectives on Gender

- SSci 325. Perspectives on Gender

E. Lifelong Understanding (6 units/10 units)

1. The Whole Person - physical and physiological issues (G.E.)

Two units chosen from:

- NSci 110. Health and Self Care (2)
- PE 205. Foundations for Lifetime Fitness (2)

2. The Whole Person - social and psychological issues (G.E.)

Two units chosen from:

- Psyc 115. Personal and Social Adjustment (2)
- Soc 110. Choices in the Life Course (2)

3. Physical Education (G.E.)

a. Noncredential candidates, two units chosen from:

- PE 101. Individual and Dual Activities (2)
- PE 114. Physical Fitness and Conditioning Activities (2)

- PE 117. Combative Activities (2)

- PE 121. Team Activities (2)

- PE 137. Aquatic Activities (2)

- PE 141. Dance Activities (2)

- PE 146. Outing Skills Activities (2)

- PE 147. A Fitness Odyssey (2)

- PE 148. Leisure Sports (2)

- PE 149. Independent Activity Project (2)

b. Credential candidates

1. Two units chosen from courses listed in (3a) above. Students are encouraged to elect a dance course, P.E. 141.

2. Four units chosen from:

- Dan 481. Creative Dance in the Classroom (4) (if not taken in category B.4.b.)

- PE 352. Movement for Children (4)

F. Multicultural/Gender Category

All students must take one upper-division course designated as meeting this requirement, chosen from groups 1 or 2 below:

1. An appropriate Integrative capstone course in one of the following categories: B6, C7, or D6.

- Hum 325. Perspectives on Gender (4)

- Hum 335. The Origin and Contemporary Role of Latino Culture (4)

- NSci 325. Perspectives on Gender (4)

- SSci 316. Race and Racism (4)
 SSci 325. Perspectives on Gender (4)
 SSci 350. Roots of Modern Racism in America (4)

2. An upper-division course that also fulfills the general elective requirement in category G1.

G. General Education Elective Options (4-8 units)

A minimum of four units must be taken from this category to satisfy general education requirements. As noted in category A2, students who pass the 495 proficiency examination must take four units of upper-division general education courses in this category in addition to the minimum four elective units. COURSES COUNTED IN THIS CATEGORY CANNOT BE COUNTED ELSEWHERE IN LIBERAL STUDIES.

1. Upper-division general education elective courses that satisfy the Multicultural/Gender requirement:

- Anth 325. Human Variation and the Concept of Race (4)
 Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 Comm 304. Intercultural Communication (4)
 Comm 401. Gender, Race and the Mass Media (4)
 CJus 451. Women and Crime (4)
 Econ 352. The Economics of Poverty and Discrimination (4)
 Eng 314. American Indian Literature (4)
 Hum 460. Cultural Studies (4)
 Mus 308. Women in Music (4)
 Phil 364. Philosophy of Race and Gender (4)
 TA 462. Afro-American Theatre and Drama (4)

2. Other elective courses: Lower-division course work from any of the areas marked (G.E.) in categories B through D above that is in excess of the units required (including French 101, Spanish 101 and German 101; however, students with two years' high school study in selected language will not receive credit in major for 101 or 102) or units chosen from the courses that follow:

- Art 210A. Western Art History: Prehistoric Times Through the Middle Ages (4)
 Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
 Art 210C. Western Art History: Modern Art-1750 to the Present (4)
 CSci 124. Exploring the Information Superhighway (2)
 CSci 127. Introduction to Computer Technology for Educators (4)
 Eng 140. Major American Authors (4)
 Mus 225. Music in the Theatre (4)
 Mus 235. Popular Music Literature (4)
 Psyc 201. Developmental Psychology (4)
 WStd 200. Introduction to Women's Studies (4)

Note: Students cannot receive credit for both:
 CSci 121. Computer Technology and People
 and

- CSci 127. Introduction to Computer Technology for Educators

H. Concentrations (20 units/18 units)

Noncredential students take twenty units and credential candidates eighteen units, only four units can be lower-division; however, exceptions can be made in mathematics, the sciences, and foreign languages at the discretion of the Liberal Studies Coordinator. Courses in the concentration must be selected in consultation with an advisor. They must be drawn from ONE of the following disciplines:

Administration
 Anthropology
 Art
 Art, Music and Theatre for Teachers
 Biology
 Chemistry
 Communication
 Computer Science
 Economics
 English
 Foreign Literature in Translation
 French
 German
 Geography
 Geology
 Health Science
 History
 Human Development
 Humanities
 Mathematics
 Music
 Philosophy
 Physical Education
 Physics
 Political Science
 Psychology
 Sociology
 Spanish
 Spanish for Public Services
 Theatre Arts
 Women's Studies

B.A. IN LIBERAL STUDIES (BILINGUAL/CROSS-CULTURAL STUDIES EMPHASIS)

**Requirements (154 units Noncredential
Students/162 units Credential Candidates)**

A multiple-subject credential candidate can pursue a bilingual/cross-cultural track within the liberal studies major. This track requires a different basic program than the standard liberal studies program, as is outlined below. Specifically, the track narrows the range of electives in humanities and the arts, the social and behavioral sciences, and the concentration in order to focus on Spanish language and culture.

BASIC PROGRAM (134 units/142 units)

- A. Language Arts (28 units)
- B. Humanities and the Arts (32 units)
- C. Mathematics and Natural Sciences (32 units/36 units)
- D. Social and Behavioral Sciences (32 units)
- E. Lifelong Understanding (6 units/10 units)
- F. Multicultural/Gender Category
- G. General Education Elective Options (4-8 units)

FIELD OF CONCENTRATION (20 units)

- H. Spanish Studies

LIBERAL STUDIES TOTAL (154 units/162 units)

Noncredential students must maintain a 2.0 ("C") grade point average in categories A through D. Credential candidates who do not maintain an overall grade point average of 2.89 will need to pass subject matter competency assessment prior to Student Teaching.

Requirements for the B.A. in Liberal Studies - Bilingual/Cross-Cultural Studies Emphasis:

A. Language Arts Breadth Area (28 units)

1. Written Communication (G.E.)
Eng 101. Freshman Composition (4)
2. Upper-division Writing Requirement (G.E.)
(*Liberal Studies recommends English 495. Expository Writing but any of the following courses qualifies.*) *Four units chosen from:*
Educ 495. Expository Writing for Education (4)
Eng 495. Expository Writing (4)
Hum 495. Expository Writing for the Humanities (4)
Mgmt 495. Expository Writing for Administration (4)
NSci 495. Expository Writing for the Natural Sciences (4)
SSci 495. Expository Writing for the Social Sciences (4)

Note: This requirement also can be met by passing a proficiency examination. Students who pass the examination will be required instead to take four units of upper-division general education course work from among those courses listed under the General Education Elective Options, see category G.

3. Oral Communication (G.E.)
Comm 120. Oral Communication (4)
4. Literature (G.E.)
Four units chosen from:
Eng 110. World Literature I (4)
Eng 111. World Literature II (4)
Eng 160. World Drama (4)
Eng 170. Studies in Literature (4)
TA 160. World Drama (4)
TA 212. Oral Interpretation of Literature (4)
5. Development of Language
 - a. *Credential candidates, four units as follows:*
Eng 311. The English Language (4)
 - b. *Non-credential students, four units chosen from:*
Eng 311. The English Language (4)
Fren 306. French Linguistics (4)
Phil 484. Philosophy of Language (4)

6. Analysis of Literature

Four units chosen from:

- Eng 301. Analysis of Poetry (4)
- Eng 302. Analysis of Drama (4)
- Eng 303. Analysis of Prose Fiction (4)
- TA 302. Analysis of Drama (4)

7. Upper-division elective

Note: A course counted under category A5 or A6 cannot be counted under category A7.

Four units chosen from:

- Eng 301. Analysis of Poetry (4)
- Eng 302. Analysis of Drama (4)
- Eng 303. Analysis of Prose Fiction (4)
- Eng 311. The English Language (4)
- Eng 314. American Indian Literature (4)
- Eng 317. Introduction to Creative Writing: Poetry (4)
- Eng 318. Introduction to Creative Writing: Fiction (4)
- Eng 320. Children's Literature (4)
- Eng 322. Studies in Literary Themes, Genres, or Authors (4)
- Eng 327. Literature for Adolescents and Young Adults (4)
- Eng 330. American Literature I (4)
- Eng 331. American Literature II (4)
- Eng 332. American Literature III (4)
- Eng 333. Myth and Epic (4)
- Eng 335. Studies in the Novel (4)
- Eng 339. African American Literature (4)
- Eng 401. English Literature of the Middle Ages (4)
- Eng 403. English Literature of the Renaissance (4)
- Eng 406. Seventeenth Century Literature (4)
- Eng 409. English Literature of the Restoration and Eighteenth Century (4)
- Eng 412. Romantic Prose and Poetry (4)
- Eng 415. Victorian Literature (4)
- Eng 442. Modern Poetry (4)
- Eng 446. Modern Fiction (4)
- Eng 450. Classical Drama (4)
- Eng 455. Modern Drama I (4)
- Eng 456. Modern Drama II (4)
- Eng 475. Shakespeare I (4)
- Eng 476. Shakespeare II (4)
- Eng 513. Advanced Creative Writing (4)
- Eng 515. Senior Seminar in Literature (4)
- Eng 565. Special Studies in Writing (2)
- Eng 566. Special Studies in Writing (4)
- Hum 312. Theories of Language Acquisition and Learning (4)
- TA 302. Analysis of Drama (4)
- TA 450. Classical Drama (4)
- TA 455. Modern Drama I (4)
- TA 456. Modern Drama II (4)
- TA 475. Shakespeare I (4)
- TA 476. Shakespeare II (4)

B. Humanities and the Arts Breadth Area (32 units)**1. Critical Thinking (G.E.)***Four units chosen from:*

- Comm 180. Critical Thinking Through Argumentation (4)
- Math 180. Critical Thinking Through Problem Solving (4)
- Phil 105. Critical Thinking Through Argument Analysis (4)
- Phil 205. Critical Thinking Through Symbolic Logic (4)
- Psyc 105. Critical Thinking Through Problems Analysis (4)
- Soc 180. Critical Thinking about Social Problems (4)

2. Philosophy (G.E.)*Four units chosen from:*

- Phil 190. Introduction to Philosophical Issues (4)
- Phil 191. Introduction to Values, Technology and Society (4)
- Phil 192. Introduction to Philosophy of Religion (4)
- Phil 193. Introduction to Eastern Philosophy (4)
- Phil 194. Introduction to Knowledge and Reality (4)

3. Spanish Language (G.E.)

- Span 212. Composition (4)

Note: Students already at the advanced level in Spanish must substitute any upper-division Spanish class for Spanish 212.

Note: Students beginning Spanish can credit in categories G2 and/or H the following courses:

- Span 101. College Spanish I
- Span 102. College Spanish II
- Span 150. Intermediate Spanish
- Span 155. Intermediate Spanish for Spanish Speakers

4. Arts**a. Four units in art (G.E.) chosen from:**

- Art 200. Studies in Art (4)
- Mus 180. Studies in Music (4)
- TA 260. Introduction to Theatre (4)

b. A minimum of four units in arts activity/arts in the classroom selected from the two disciplines not studied in Section a (students choosing Theatre Arts 260 in category a cannot use Dance courses to fulfill this category) and chosen from:

- Art 211. Visual Composition and Perception (2.5)
- Art 212. Color and Light (2.5)
- Art 213. Form in Space and Time (2.5)
- Art 214. Methods and Materials (2.5)
- Art 215. Basic Drawing (2.5)
- Art 216. Life Drawing (2.5)
- Art 335. Painting I (5)
- Art 354. Ceramics I (5)
- Art 368. Woodworking and Furniture Design I (5)
- Art 375. Glass (5)
- Art 380. Communications Design I (5)
- Art 390. Beginning Photography (5)
- Art 395. Art in the Classroom (4)

- Dan 200. Studies in Dance (2)
- Dan 300. Dance Technique (2)
- Dan 481. Creative Dance in the Classroom (4) (if not taken in category E.3.b.)
- Mus 205A. Class Guitar I (1)
- Mus 206. Class Voice (1)
- Mus 216. Class Recorder I (1)
- Mus 217. Class Recorder II (1)
- Mus 220. Class Piano I (1)
- Mus 221. Class Piano II (1)
- Mus 222. Class Piano III (1)
- Mus 380. Chamber Orchestra (1)
- Mus 381. Wind Ensemble (1)
- Mus 385. Concert Choir (1)
- Mus 391. Jazz Ensemble (1)
- Mus 410. Music in the Elementary Schools (4)
- Mus 516. Teaching Recorder in the Elementary School I (2)
- Mus 517. Teaching Recorder in the Elementary School II (2)
- Mus 531. Musical Development for the Classroom Teacher (4)
- Mus 550. Music in the Elementary Classroom (4)
- Mus 570. Music Creativity for the Elementary Classroom (2)
- TA 235. Fundamentals of Stage Design (4)
- TA 251. Acting I (3)
- TA 252. Acting II (3)
- TA 320A. Theatre Practicum: Performance (2)
- TA 320B. Theatre Practicum: Imagination Players (2)
- TA 320C. Theatre Practicum: Touring Theatre (2)
- TA 320E. Theatre Practicum: Special Production (2)
- TA 337. Design: Costume Design (3)
- TA 385. Acting for Non-Majors (4)
- TA 481. Creative Drama in the Classroom (4)
- TA 483. Children's Theatre (4)
- TA 484. Readers Theatre in the Classroom (4)

5. Upper-division Spanish Language Skills*Eight units as follows:*

- Span 302. Theory and Practice in Composition (4)
- Span 415. Comparative Linguistics: Spanish/English (4)

Note: Credential candidates must maintain a 3.0 ("B") or above in this course.

6. Integrative Capstone in the Humanities (G.E.)**a. Credential candidates:**

- Hum 335. The Origin and Contemporary Role of Latino Culture (4) (meets the requirements in category F1.)

Note: Credential candidates must maintain a 3.0 ("B") or above in this course.

b. Noncredential students:*Four units chosen from:*

- Hum 319. Myth, Metaphor and Symbol (4)
- Hum 325. Perspectives on Gender (4) (meets the requirement in category F1.)

- Hum 330. Arts and Ideas (4)
 Hum 335. The Origin and Contemporary Role of Latino Culture (4)
 Hum 340. Interpretation and Values (4)
 Hum 344. Ideas in American Culture (4)
 Hum 380. Comparative Studies in the Arts and Literature of Western and Non-Western Cultures (4)
 Hum 385. A Cultural History of Fashion (4)

Note: Students can receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender
 NSci 325. Perspectives on Gender
 SSci 325. Perspectives on Gender

C. Mathematics and Natural Sciences Breadth Area (32 units/36 units)

1. Mathematics (G.E.):

Four units chosen from:

- Math 110. College Algebra (4)
 Math 115. The Ideas of Mathematics (4)
 Math 120. Pre-Calculus Mathematics (4)
 Math 192. Methods of Calculus (4)
 Math 211. Basic Concepts of Calculus (4)

2. Mathematical Applications:

Four units chosen from:

- Math 211. Basic Concepts of Calculus (4)
 Math 212. Calculus II (4)
 Math 302. Problem Solving in Mathematics (4)

Note: Math 211. Basic Concepts of Calculus may not be taken for credit by students who have received credit for this course in category C1.

3. Life Science (G.E.):

Five units chosen from:

- Biol 100. Topics in Biology (5)
 Biol 200. Biology of the Cell (5)
 Biol 250. Biology of Ecosystems (5)
 HSci 120. Health and Society: An Ecological Approach (5)

4. Physical and Earth Sciences

A. *Noncredential students, a minimum of five units chosen from:*

- Chem 100. Chemistry in the Modern World (5)
 Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
 Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
 Geog 103. Physical Geography (5)
 Geol 101. Physical Geology (5)
 Phys 100. Physics in the Modern World (5)
 Phys 103. Descriptive Astronomy (5)
 Phys 121. Basic Concepts of Physics (5)
 Phys 221. General Physics (5)

B. *Credential candidates, (nine units) one of the following three course sequences (1, 2 or 3) to include one course in each of the physical sciences (physics and chemistry) and earth/space sciences (geology, geography and astronomy).*

1. a. *One of the following:*

- Chem 100. Chemistry in the Modern World (5)

- Chem 205. Fundamentals of Chemistry I: General Chemistry (5)
 Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)

- b. Geol 304. Geology in the Classroom (2)
 c. Phys 304. Physics in the Classroom (2)

2. a. *One of the following:*

- Phys 100. Physics in the Modern World (5)
 Phys 121. Basic Concepts of Physics (5)
 Phys 221. General Physics (5)

- b. Chem 304. Chemistry in the Classroom (2)
 c. Geol 304. Geology in the Classroom (2)

3. a. *One of the following:*

- Geog 103. Physical Geography (5)
 Geol 101. Physical Geology (5)
 Phys 103. Descriptive Astronomy (5)
 b. Chem 304. Chemistry in the Classroom (2)
 c. Phys 304. Physics in the Classroom (2)

5. Special Topics in Science and Technology (G.E.)

Two units chosen from:

- Biol 216. Genetics and Society (2)
 Biol 217. Biology of Sexually Transmitted Diseases (2)
 Chem 105. Chemicals in Our Environment (2)

6. Mathematics and Natural Sciences Electives

a. *Credential candidates, eight units as follows:*

- CSci 127. Introduction to Computer Technology for Educators (4)
 Math 301. Basic Mathematics for Educators (4)

b. *Non-credential students, eight units, at least four units must be upper-division, chosen from: biology, chemistry, computer science, geology, health science, mathematics, natural sciences or physics courses. At least two units must be chosen from:*

- CSci 121. Computer Technology and People (2)
 CSci 124. Exploring the Information Superhighway (2)
 CSci 127. Introduction to Computer Technology for Educators (4)

Note: Students cannot receive credit for both:

- CSci 121. Computer Technology and People
 and
 CSci 127. Introduction to Computer Technology for Educators

7. Integrative Capstone in the Natural Sciences (G.E.)

Four units chosen from:

- NSci 300. Science and Technology (4)
 NSci 310. The Environment and Human Survival (4)
 NSci 312. Scientific Contributions to the Development of Civilization (4)
 NSci 314. Life in the Cosmos (4)
 NSci 320. Energy (4)
 NSci 325. Perspectives on Gender (4) (Meets the requirement in category F1.)
 NSci 351. Health and Human Ecology (4)
 NSci 360. Legacy of Life (4)

Note: Students may receive credit for only one of the following courses:

Hum 325.	Perspectives on Gender
NSci 325.	Perspectives on Gender
SSci 325.	Perspectives on Gender

D. Social and Behavioral Sciences Breadth Area (32 units)

1. American History and Civilization (G.E.)

Four units chosen from:

Hist 146.	American Civilization (4)
Hist 200.	United States History to 1877 (4)
Hist 201.	United States History, 1877 to the Present (4)

2. American Institutions (G.E.)

PSci 203. American Government (4)

Note: The American History, Constitution, State and Local Government requirement can be met by taking Political Science 203 and either History 146, 200, 201. However, even if this requirement is met by examination, students must still take eight units of lower-division coursework, chosen from categories D3 and D4 and counted in categories D1 through D2.

3. World Cultures (G.E.)

Four units chosen from:

Anth 140.	World Civilizations I, the Rise of Civilization (4)
Hist 140.	World Civilizations I, the Rise of Civilization (4)
Hist 142.	World Civilizations II, the Civilizations of the East and the West (4)
Hist 144.	World Civilizations III, the Expansion of Europe (4)
SSci 165.	Regions and Peoples of the World (4)

4. Discipline Perspectives (G.E.)

Four units chosen from:

Anth 100.	Introduction to Anthropology: Human Evolution (4)
Anth 102.	Introduction to Anthropology: Culture and Society (4)
Econ 104.	Economics of Social Issues (4)
ES 100.	Ethnicity and Race in America (4)
Geog 100.	Introduction to Human Geography (4)
PSci 100.	Introduction to Political Science (4)
Psyc 100.	Introduction to Psychology (4)
Soc 100.	The Study of Society (4)

5. Social Science Electives

a. Credential candidates, twelve units as follows:

1. Psyc 320. Psychology of Middle Childhood (4)
2. *Eights units from Historical and Anthropological contexts chosen from:*
 - Anth 354. Cultures of Mexico and Central America (4)
 - Anth 356. Cultures of South America (4)
 - Hist 390. History of Modern Mexico (4)
 - Hist 391. Chicano History (4)
 - Hist 470. Modern Latin America (4)

b. Noncredential students, twelve units as follows:

1. Eights units from Historical and Anthropological contexts chosen from:

Anth 354.	Cultures of Mexico and Central America (4)
Anth 356.	Cultures of South America (4)
Hist 390.	History of Modern Mexico (4)
Hist 391.	Chicano History (4)
Hist 470.	Modern Latin America (4)

2. Four upper-division units chosen from:

anthropology, criminal justice, economics, geography, history, political science, psychology, social sciences, sociology and women's studies.

6. Integrative Capstone in the Social and Behavioral Sciences (G.E.)

Four units chosen from:

SSci 300.	Nonwestern World (4)
SSci 304.	Contemporary Latin America (4)
SSci 315.	Cultural Adaptation: The Quest for Survival (4)
SSci 316.	Race and Racism (4) (meets the requirement in category F1.)
SSci 320.	Understanding Capitalism (4)
SSci 321.	Urbanization and the Urban Environment (4)
SSci 325.	Perspectives on Gender (4) (meets the requirement in category F1.)
SSci 343.	Understanding Socialism (4)
SSci 345.	Religious Expression in America (4)
SSci 350.	Roots of Modern Racism in America (4) (meets the requirement in category F1.)

Note: Students may receive credit for only one of the following courses:

Hum 325.	Perspectives on Gender
NSci 325.	Perspectives on Gender
SSci 325.	Perspectives on Gender

E. Lifelong Understanding (6 units/10 units)

1. The Whole Person - physical and physiological issues (G.E.)

Two units chosen from:

NSci 110.	Health and Self Care (2)
PE 205.	Foundations for Lifetime Fitness (2)

2. The Whole Person - social and psychological issues (G.E.)

Two units chosen from:

Psyc 115.	Personal and Social Adjustment (2)
Soc 110.	Choices in the Life Course (2)

3. Physical Education (G.E.)

a. Noncredential students, two units chosen from:

PE 101.	Individual and Dual Activities (2)
PE 114.	Physical Fitness and Conditioning Activities (2)
PE 117.	Combative Activities (2)
PE 121.	Team Activities (2)
PE 137.	Aquatic Activities (2)
PE 141.	Dance Activities (2)
PE 146.	Outing Skills Activities (2)
PE 147.	A Fitness Odyssey (2)
PE 148.	Leisure Sports (2)
PE 149.	Independent Activity Project (2)

b. *Credential candidates:*

1. Two units chosen from courses listed in (3a) above. Students are encouraged to elect a dance course, P.E. 141.
2. *Four units chosen from:*
 - Dan 481. Creative Dance in the Classroom (4)
(if not taken in category B.4.b.)
 - PE 352. Movement for Children (4)

F. Multicultural/Gender Category

All students must take one upper-division course designated as meeting this requirement, chosen from groups 1 or 2 below:

1. An appropriate Integrative Capstone course in one of the following categories: B6, C7, or D6.
 - Hum 325. Perspectives on Gender (4)
 - Hum 335. The Origin and Contemporary Role of Latino Culture (4)
 - NSci 325. Perspectives on Gender (4)
 - SSci 316. Race and Racism (4)
 - SSci 325. Perspectives on Gender (4)
 - SSci 350. Roots of Modern Racism in America (4)
2. An upper-division course that also fulfills the general elective requirement in category G1.

G. General Education Elective Options Category (4-8 units)

A minimum of four units must be taken from this category to satisfy general education requirements. As noted in category A2 above, students who pass the 495 proficiency examination must take four units of upper-division general education courses in this category in addition to the minimum four elective units. COURSES COUNTED IN THIS CATEGORY CANNOT BE COUNTED ELSEWHERE IN LIBERAL STUDIES.

1. *Upper-division general education elective courses that satisfy the multicultural/gender requirement:*
 - Anth 325. Human Variation and the Concept of Race (4)
 - Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 - Comm 304. Intercultural Communication (4)
 - Comm 401. Gender, Race and the Mass Media (4)
 - CJus 451. Women and Crime (4)
 - Econ 352. The Economics of Poverty and Discrimination (4)
 - Eng 314. American Indian Literature (4)
 - Hum 460. Cultural Studies (4)
 - Mus 308. Women in Music (4)
 - Phil 364. Philosophy of Race and Gender (4)
 - TA 462. Afro-American Theatre and Drama (4)
2. *Other elective courses: Lower-division course work from any of the areas marked (G.E.) in categories B through D above that is in excess of the units required (including French 101, Spanish 101 and German 101; however, students with two years' high school study in selected language will not receive credit in major for 101 or 102) or units drawn from the courses that follow:*

- Art 210A. Western Art History: Prehistoric Times Through the Middle Ages (4)
- Art 210B. Western Art History: Renaissance, Baroque and Rococo (4)
- Art 210C. Western Art History: Modern Art-1750 to the Present (4)
- CSci 124. Exploring the Information Superhighway (2)
- CSci 127. Introduction to Computer Technology for Educators (4)
- Eng 140. Major American Authors (4)
- Mus 225. Music in the Theatre (4)
- Mus 235. Popular Music Literature (4)
- Psyc 201. Developmental Psychology (4)
- WStd 200. Introduction to Women's Studies (4)

Note: Students cannot receive credit for both:

CSci 121. Computer Technology and People

and

CSci 127. Introduction to Computer Technology for Educators

H. Spanish Studies (20 units)

Twenty units chosen from:

- Anth 330. Cross-Cultural Child-Rearing Practices (4)
- Anth 354. Cultures of Mexico and Central America (4)
- Anth 356. Cultures of South America (4)
- Anth 460. Language and Culture (4)
- Art 328. Mexican Art (4)
- FLan 320. Masterpieces of Literature (4)
- Hist 390. History of Modern Mexico (4)
- Hist 391. Chicano History (4)
- Hist 470. Modern Latin America (4)
- IS 460. Aspects of Chicano Culture (4)
- Mus 351. Latin American Music (4)

These two courses must be taken together, if chosen:

- Span 101. College Spanish I (4)
- Span 102. College Spanish II (4)

May choose only one of the following:

- Span 150. Intermediate Spanish (4)
- Span 155. Intermediate Spanish for Spanish Speakers (4)

Upper-division Spanish courses (300-level or above)

Note: Course work credited elsewhere in the bilingual/cross-cultural emphasis cannot be counted in the concentration. Spanish 101, 102, 150 or 155 can fulfill the general education elective option, category G2.

TEACHING CREDENTIAL PROGRAM

For full information regarding requirements for teaching credentials and admission to the credential program, see Page 138. Students should contact the School of Education C.A.S.E. Student Teaching Office soon after their initial enrollment at the university to indicate their interest in pursuing a teaching career and to obtain more detailed information about the process of applying for admission to the credential program.

Please note that prior to admission to student teaching, liberal studies students must have a 2.89 CSUSB grade point average and be assessed and recommended by the liberal studies faculty for subject matter competency and pass the California Basic Educational Skills Test (CBEST).

In order to complete the professional education sequence and qualify to student teach during their senior year, liberal studies majors should plan their course of study carefully and include the following courses in their undergraduate program:

Prerequisite course:

EEIB 321. Culture and Schooling

Phase I:

Requirements: admission to the credential program and junior standing.

EEIB 331. Growth and Development in Socio-Educational Contexts

EEIB 332. Educational Psychology for a Diverse Society

EEIB 333. Curriculum and Instruction for a Diverse Society

Phase II:

EEIB 441. Mathematics Curriculum and Methods for a Diverse Society

EEIB 443. Science Curriculum and Methods for a Diverse Society

EEIB 445. Reading/Language Arts Curriculum and Methods for a Diverse Society

Phase III:

Requirements: completion of 4/5 of the major, senior standing, and admission to student teaching.

1. First quarter of student teaching:

EEIB 450A. Elementary Student Teaching

EEIB 447. Social Studies/Humanities Curriculum and Methods for the Elementary School

EEIB 451. Specially Designed Academic Instruction in the Elementary School

2. Second quarter of student teaching:

EEIB 450B. Elementary Student Teaching

EEIB 452. Second Language Acquisition in the Elementary School

EEIB 480. Capstone Seminar

MANAGEMENT

Department of Management

Jack Brown Hall, Room 461
880-5731

FACULTY: Gabriel Bassiry, Shel Bockman, John Chaney, Foad Derakhshan, Donald Drost, Cherrlyn Eller, Sue Greenfeld, Lee Hanson, Jeanne King, Joan Kritzberg, Steve Levy, Janice Loutzenhiser, Joseph Lovell, Patrick McInturff, Clark Molstad, Gary Patterson, Lloyd Peake, Patricia Reed, Ernesto Reza, Jim Rogers (Chair), Elisabeth Ryland

The university offers concentrations in management within the Bachelor of Arts in Administration and the Master of Business Administration. Concentrations are offered under the B.A. in Management, Human Resources Management, Small Business Management, and the B.S. in International Business. The details of these programs are listed under Administration on Page 75. The Master of Business Administration can be found on Page 330. The courses listed below are offered in support of these programs. Further information is available from the Department of Management.

The Management Department encourages its majors to take part in the California State University's International Programs and the London Business Program. These programs provide opportunity for CSUSB students to study in a foreign country and earn full resident credit for these studies. Participation in this program will enhance the student's ability to study and work in an international business setting.

For students in management, International Programs are particularly useful in an increasingly competitive global environment where knowledge of diverse cultures, beliefs and societies is essential for success in business. By joining the California State University's International Programs students will have taken a major step in preparing themselves for rewarding careers in the business world of the future. For further information see Page 22.

COURSE OFFERINGS IN MANAGEMENT (Mgmt)

Lower Division

100. Introduction to Business and Public Administration

Introduction to the administrative process. Strategies to achieve success in business and public careers. Includes the development of administrative theories and practices and provides an overview of the functional areas of Business and Public Administration. Examines the questions of ethics, small business management and the global aspects of administration. (4 units)

230. Business Law

An introduction to statutory and common law developments impacting commercial transactions. Emphasizes principles of contract law and sale of goods under the Uniform Commercial Code. Additional topics include business organizations, commercial paper and secured transactions. (CAN BUS 8). (4 units)

Upper Division

Enrollment in upper division courses restricted to students who have met all prerequisites and have completed at least 89.9 quarter units (junior class level). Students who do not meet these requirements will be disenrolled.

302. Management and Organizational Behavior

Introduction to management as it affects operations and the behavior of people in relation to the functional fields of administration. Selected behavioral concepts analyzed with respect to applications in management. (Also offered as Psychology 302. Students may not receive credit for both.) (4 units)

330. Legal Environment of Business

Study of the legal system; nature and source of law as applied to business activity; statutes and significant cases involving business policies; effect of public policies on private enterprise system. *Prerequisite:* Management 230. (4 units)

335. Business and Society

Evaluation of American business systems; political, legal and social factors influencing business; role of business in alleviating society's problems; problems and issues of current concern regarding women and minorities in management. Formerly Management 530. (4 units)

350. Administrative Communications

Introduction to communication theory. Concepts, analysis and methods of improvement for interpersonal communication, communication within organizations and communication between organizations and their external environments. (4 units)

402. Studies in Organizational Behavior

Review and presentation of selected areas of behavioral science research and its application to management practices. Selected subjects may include: motivation, communication, change and leadership. *Prerequisite:* Management 302 or Psychology 302. (4 units)

405. International Management

Identification of the diverse factors, actors and forces that shape the global business environment. Comparative analysis of management practices in various cultures with emphasis on sociocultural, political and economic influences. Need for adaptation of business practices to local environment is stressed. *Prerequisite:* Management 302 or Psychology 302. (4 units)

406. International Business Law

Comparison and contrast of the various dimensions of international business transactions. General legal framework in which international business is conducted; competing national laws and courts systems with respect to a variety of typical international business problems; international institutions and prospects for internationalizing the legal treatment of transnational business operations. (4 units)

432. Human Factors in System Development

Principles of human factors design applied to the user-system interface in business, industrial, computer, control and information management systems. Formerly Management 532.

Prerequisite: Management Science 210 or Mathematics 305 or 350 or Psychology 210. (4 units)

442. Small Business Management

Managerial considerations for the small business entrepreneur. Acquisitions, location, legal considerations, finances, taxation, labor relations and other topics. (4 units)

451. Organization and Management Theory

Development and analysis of organization and management theory. Comparative analysis seeking patterns and systematic explanation of differences among organizations. Dynamics of interaction between organizations and environment. *Prerequisite: Management 302 or Psychology 302.* (4 units)

455. Human Resources Management

Policies related to human resources; human resources planning, employee selection and development, performance appraisal, compensation, relationships with unionized employees, collective bargaining. *Prerequisite: Management 302 or Psychology 302.* (4 units)

456. Psychology of Human Resources

Review of research in application of psychology to selection, evaluation and training of human resources. Topics include fair employment legislation, job analysis methodologies, merit evaluation, interviewing techniques and psychometric methods. *Prerequisites: Management 455 or Psychology 355 and Management Science 210, Mathematics 305, Psychology 210, or Social Science 215.* (4 units)

457. Industrial and Labor Relations

Social forces leading to collective employee action in relation to labor legislation and collective bargaining. Utilizes current development, case law and bargaining simulation. *Prerequisite: Management 455.* (4 units)

458. Fair Employment Practices

An evaluation of fair employment practices in employment. Course emphasizes antidiscriminatory legislation and its application to employer-employee relationships. *Prerequisite: Management 455.* (4 units)

459. Work Group Management

Intensive examination of the dynamics of task-oriented groups, utilizing both conceptual and experiential learning. *Prerequisite: Management 302 or Psychology 302.* (4 units)

490. Administrative Strategy and Policy

An integrative, problem-solving approach to problems which confront the administrator. Topics are explored by utilizing skills and techniques developed in previous course work.

Prerequisites: administration core and senior standing. (4 units)

495. Expository Writing for Administration

Writing related to business and public administration including documented research reports, summaries and analytical papers. Revision and rewriting will be required. Course fulfills the graduation requirement in writing proficiency. May not be counted for fulfilling concentration requirements for any degree program offered by the School of Business and Public Administration. No more than one of the expository writing courses (Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, Social Sciences 495) may be taken for credit. Students who have received a grade of no credit in any combination of the expository writing courses two or more times must meet with the 495 coordinator or designee to design a developmental writing plan as a condition for enrolling for a third quarter. All students must obtain junior status at the time of registration or their course request will be cancelled. Graded A, B, C/No credit. *Prerequisites: English 101 and a minimum of 90 quarter (60 semester) units of college credit.* (4 units)

515. Small Business Consulting

Supervised consulting assignments designed to provide meaningful business assistance to small businesses. *Prerequisites: consent of instructor and school.* (4 units)

575. Internship in Management

Supervised work and study in private business organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and department.* (4 units)

590. Seminar in Management

An intensive study of some phase of management to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

MANAGEMENT SCIENCE

Department of Information and Decision Sciences

Jack Brown Hall, Room 460
880-5723

FACULTY: Anand Bhatia, Harold Dyck, Kamvar Farahbod, Jack McDonnell, Barbara Sirotnik, Jay Varzandeh

The university offers concentrations in management science within the Bachelor of Arts in Administration, the Bachelor of Science in Administration and the Master of Business Administration. A concentration of production and operations management is offered within the Bachelor of Science in Administration and the Master of Business Administration. The details of these programs are listed under Administration on Page 75 and the Master of Business Administration on Page 330. The courses listed below are offered in support of these programs. Further information is available from the Department of Information and Decision Sciences.

COURSE OFFERINGS IN MANAGEMENT SCIENCE (MSci)

Lower Division

210. Applied Business Statistics

An introduction to statistical reasoning and application of primary statistical techniques used in solving managerial problems. Covers both descriptive and inferential statistics. A self-paced version of this course (Management Science 210S) is also available. Students may not receive credit for more than one of the following courses: Management Science 210, 210S, (210A) Psychology 210 or Social Sciences 215. (4 units)

Upper Division

Enrollment in upper division courses restricted to students who have met all prerequisites and have completed at least 89.9 quarter units (junior class level). Students who do not meet these requirements will be disenrolled.

304. Principles of Production and Operations Management

Introduction to production/operations management concepts and techniques. Quantitative methods that aid the manager in making rational decisions in manufacturing and service industries are discussed. Emphasis is on the application of models to managerial decision making. A self-paced version of this course (Management Science 304S) is also available. Students may not receive credit for both. *Prerequisites:* Mathematics 110 or 120 and Management Science 210. (4 units)

355. Statistical Software

An intensive study of statistical computer packages that are available for micro-, mini- and mainframe computers. Various statistical packages are explored, such as SPSS, SAS, and BMDP. *Prerequisite:* Management Science 210. (2 units)

360. Statistical Analysis for Management

Application of probabilistic models and statistical decision theory to decision-making within the enterprise; techniques for optimization of administrative decisions. *Prerequisites:* Management Science 304, Mathematics 192, and one of the following: Management Science 210 or Mathematics 305 (or 350.) (4 units)

400. Quantitative Decision Methods

Quantitative methods of analysis used in solution of administrative problems, including linear programming and calculus applications. *Prerequisites:* Management Science 304, Mathematics 192, and one of the following: Management Science 210 or Mathematics 305 (or 350.) (4 units)

466. Production Planning and Operations Research

Production and operations planning and control methodologies using quantitative approaches and models. The emphasis in the course is application of both deterministic and stochastic models in tangible goods and service organizations. *Prerequisites:* Management Science 210, 304 and Mathematics 110. (4 units)

467. Research Methods

Principles of research design, development of research instruments, data accumulation and manipulation for the operations research area. Students conduct research projects and learn the theory and methods of industrial research. *Prerequisites:* Management Science 210, 304 and 360. (4 units)

468. Advanced Production Management

Advanced topics in production and operation management using various methodologies such as quantitative, statistical and computer modeling, with an emphasis on industrial and service organization applications. *Prerequisite:* Management Science 466. (4 units)

470. Inventory Control

Introduction to inventory control in the manufacturing and service organization environment focusing on the theory and practice of the development, application and quality control aspects of inventory control. *Prerequisites:* Management Science 210, 304 and 360. (4 units)

499. Practicum in Management Science

Integration and application of quantitative, statistical and computer modeling in case studies and field research of various organizational environments. *Prerequisite:* consent of instructor. (2 units)

575. Internship in Management Science

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit.

Prerequisites: consent of instructor and school. (4 units)

590. Seminar in Management Science

An intensive study of some phase of management science to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken. (Credit to be arranged: 2 or 4 units)*

MARKETING

Department of Marketing

Jack Brown Hall, Room 458
880-5749

FACULTY: Michael Boorum, Fred Hebein, Vic Johar, Lynn Judd, Norton Marks, Nabil Razzouk (Chair), Arthur Saltzman, Victoria Seitz, Mary Smith

The university offers a concentration in marketing within the Bachelor of Arts in Administration, the Bachelor of Science in Administration and the Master of Business Administration. The details of these programs are listed under Administration on Page 75. The Master of Business Administration can be found on Page 330. The courses listed below are offered in support of these programs. Further information is available from the Department of Marketing.

In today's business world, growing numbers of U.S. companies both large and small are getting involved in international marketing. Because of this increased involvement in international business, marketing students are encouraged to participate in the California State University's International Program. For further information, see Page 22.

COURSE OFFERINGS IN MARKETING (Mktg)

Upper Division

Enrollment in upper division courses restricted to students who have met all prerequisites and have completed at least 89.9 quarter units (junior class level). Students who do not meet these requirements will be disenrolled.

305. Marketing Principles

Overview of the field of marketing and its interactions with other aspects of business. Includes consumer and industrial buying behavior; target marketing, segmentation, positioning, and differentiation; marketing research; product, distribution, promotion, and pricing decisions; industrial, services, and international marketing as well as legal and ethical dimensions. *Prerequisite: junior standing.* (4 units)

410. Consumer Behavior

Consumer decision processes in the consumptive role including internal and external influences on consumer behavior and marketing strategies. *Prerequisite: Marketing 305.* (4 units)

415. Product Management

Innovation, development, extension, management and strategy formulation of products. *Prerequisite: Marketing 305.* (4 units)

416. Marketing Research

Marketing research as an activity of information gathering, analysis and interpretation for input into management decision making. Application of current practices and techniques in the marketing research industry. Requires the use of statistical software. Formerly Marketing 440. *Prerequisites: Marketing 305 and Management Science 210 or Mathematics 305.* (4 units)

420. Advertising

Stimulation of market demand through advertising media, including printed messages, radio and television, developing the advertising appeal, selecting the media, placing copy and measuring results, as well as legal, ethical and international aspects of advertising. *Prerequisites: Marketing 305 and 410.* (4 units)

430. Professional Selling

Interpersonal communication skills used in the selling of products and services. Skills in prospecting, questioning and listening, understanding needs, demonstrating and explaining products, overcoming objections and closing the sale. Emphasis is on long run, ethical, relational selling. Oral presentations are required. *Prerequisite: junior standing.* (4 units)

431. Sales Management

Managerial techniques used to supervise a sales force and to analyze company sales. Emphasis on recruitment, training, motivation and evaluation of salespeople. Students should develop skills in sales forecasting, establishing quotas and evaluation of sales performance and effectiveness of salespeople. *Prerequisite: Marketing 305.* (4 units)

438. Industrial Marketing

Analysis of the marketing of industrial goods and services in businesses and government including the process of developing formal proposals involving product, price, quality and service commitment standards. Analysis of institutional practices such as competitive bids, negotiated contracts and just-in-time delivery. *Prerequisite: Marketing 305.* (4 units)

446. Advertising Campaign

Development of a full marketing and advertising campaign for a client's regional or national product or service. Offered as needed for student competitions or grant opportunities. Formerly Marketing 423. *Prerequisites: Marketing 305, 410, 420 and consent of instructor.* (4 units)

450. Logistics

Science of movement, storage, delivery and distribution. Topics include channels of distribution, purchasing, customer service, inventory types and functions. *Prerequisites: Management Science 210 or Mathematics 305 (or 350); and Marketing 305.* (4 units)

460. Retailing

History, development, organization and management of retail institutions. Emphasis is on retail store operations, such as location, layout, planning, control of budgets, human resource planning, pricing and customer service. *Prerequisite: Marketing 305.* (4 units)

462. Merchandising

Analysis of merchandise buying. Emphasis is on the buyer's roles, responsibilities and activities. Subjects include merchandise planning, budgeting, inventory control, pricing, vendor relations, and sourcing. *Prerequisites: Accounting 211, 212, and Marketing 305.* (4 units)

470. International Marketing Management

Marketing strategies for developing global markets including the cultural, political, and economic infrastructure of foreign markets and their impact on traditional marketing decisions. *Prerequisite: Marketing 305.* (4 units)

472. Import-Export Management

Current practices and opportunities in importing and exporting goods with emphasis on preparing products for foreign shipment, shipping, necessary documentation and use of free trade zones. *Prerequisite: Marketing 305.* (4 units)

496. Marketing Planning and Strategy

Strategies and techniques in marketing management. Students apply prior material from the business curriculum to contemporary marketing problems. Emphasis is on analyzing real world situations, developing conceptual frameworks that place the proper perspective on key aspects of marketing problems and on making decisions with limited information. Includes written and oral presentation assignments. *Prerequisites: successful completion of 16 units of 400- or 500-level marketing courses, Economics 200 and 202, and Finance 313.* (4 units)

575. Internship in Marketing

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Marketing

An intensive study of some phase of marketing to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

MATHEMATICS

Department of Mathematics

Jack Brown Hall, Room 370
880-5361

Bachelor of Arts

Mathematics

Bachelor of Science

Mathematics

Teaching Credential Program

Mathematics

Minor

Mathematics

Master of Arts

Mathematics

(Degree requirements can be found on Page 398.)

Certificate Program

Teaching Basic Mathematics

FACULTY: Susan Addington, Joseph Chavez, Hajrudin Fejzic, Davida Fischman, Christopher Freiling, Gary Griffing, J. Terry Hallett, Zahid Hasan, Denis Lichtman, Dolores Matthews, Jim Okon, Chetan Prakash, Dan Rinne, John Sarli, Charles Stanton, Joel Stein, Robert Stein, Rolland Trapp, Belisario Ventura, Paul Vicknair (Chair), Peter Williams

As the role of mathematics in society continues to grow, the value of a solid foundation in mathematics is reinforced. The Department of Mathematics offers a broad program of university course work with a liberal arts emphasis, leading either to a bachelor of arts or to a bachelor of science degree. Such a program of study is flexible enough to prepare a student for positions in industry, business, teaching, or for advanced study toward a graduate degree in mathematics.

Additionally, double majors are not uncommon since the Departments of Computer Science and Physics work closely with the Department of Mathematics in structuring their mathematically based courses.

The department also offers a Master of Arts degree. The emphasis in this program is on a broad mathematics curriculum, making it ideal for those planning a career in teaching, either at the junior college level or in the school district. An effort is made to offer the core courses in this program in the evening to accommodate the working student. For information on this degree, see Page 398.

In many ways mathematics functions as a universal language in today's global culture. Upper-division students are encouraged to participate in the California State University's International Programs. For further information, see Page 22.

B.A. IN MATHEMATICS

Requirements (74 units)

Requirements for the B.A. in Mathematics:

Lower-division requirements (26 units)

1. CSci 201. Computer Science I (4)
or
CSci 240. FORTRAN Programming (4)
2. Math 211. Basic Concepts of Calculus (4)
3. Math 212. Calculus II (4)
4. Math 213. Calculus III (4)
5. Math 241. Problem Solving in Calculus (2)
6. Math 251. Multivariable Calculus I (4)
7. Math 252. Multivariable Calculus II (4)

Upper-division requirements (28 units)

1. Math 331. Linear Algebra (4)
2. Math 345. Number Theory and Proof (4)
3. Math 355. Analysis and Proof (4)
4. Math 372. Combinatorics (4)
5. Math 465. Probability Theory (4)
6. Math 545. Abstract Algebra I (4)
7. Math 553. Analysis I (4)

Electives (20 units)

Twenty units of mathematics electives chosen from the following in consultation with an advisor:

- Math 270. Elementary Differential Equations (4)

May choose only one of the following:

- Math 373. Mathematical Methods of Physics I (4)

- Phys 373. Mathematical Methods of Physics I (4)

- Math 411. Introduction to Mathematical Logic (4)

- Math 470. Ordinary Differential Equations (4)

May choose only one of the following:

- Math 473. Mathematical Methods of Physics II (4)

- Phys 473. Mathematical Methods of Physics II (4)

- Math 474. Numerical Methods (4)

- Math 510. Topics in Mathematics (4)

- Math 529. Advanced Geometry (4)

- Math 546. Abstract Algebra II (4)

- Math 554. Analysis II (4)

- Math 555. Introduction to Point-Set Topology (4)

- Math 557. Complex Variables (4)

- Math 565. Mathematical Statistics (4)

May choose only one of the following:

- Math 573. Mathematical Methods of Physics III (4)

- Phys 573. Mathematical Methods of Physics III (4)

- Math 576. Introduction to Mathematical Models (4)

B.S. IN MATHEMATICS

Requirements (105 units)

Requirements for the B.S. in Mathematics:

Lower-division requirements (31 units)

1. CSci 201. Computer Science I (4)
or
CSci 240. FORTRAN Programming (4)
2. Math 211. Basic Concepts of Calculus (4)
3. Math 212. Calculus II (4)
4. Math 213. Calculus III (4)
5. Math 241. Problem Solving in Calculus (2)
6. Math 251. Multivariable Calculus I (4)
7. Math 252. Multivariable Calculus II (4)
8. Phys 221. General Physics I (5)

Upper-division requirements (28 units)

1. Math 331. Linear Algebra (4)
2. Math 345. Number Theory and Proof (4)
3. Math 355. Analysis and Proof (4)
4. Math 372. Combinatorics (4)
5. Math 465. Probability Theory (4)
6. Math 545. Abstract Algebra I (4)
7. Math 553. Analysis I (4)

Electives (46 units)

Twenty-four units of mathematics electives selected from the following with at least eight units chosen from 500-level courses:

- Math 270. Elementary Differential Equations (4)

May choose only one of the following:

- Math 373. Mathematical Methods of Physics I (4)

- Phys 373. Mathematical Methods of Physics I (4)

- Math 411. Introduction to Mathematical Logic (4)

- Math 470. Ordinary Differential Equations (4)

May choose only one of the following:

- Math 473. Mathematical Methods of Physics II (4)

- Phys 473. Mathematical Methods of Physics II (4)

- Math 474. Numerical Methods (4)

- Math 510. Topics in Mathematics (4)

- Math 529. Advanced Geometry (4)

- Math 546. Abstract Algebra II (4)

- Math 554. Analysis II (4)

- Math 555. Introduction to Point-Set Topology (4)

- Math 557. Complex Variables (4)

- Math 565. Mathematical Statistics (4)

May choose only one of the following:

- Math 573. Mathematical Methods of Physics III (4)

- Phys 573. Mathematical Methods of Physics III (4)

- Math 576. Introduction to Mathematical Models (4)

Twenty-two units in approved additional courses beyond the general education requirements from at most two disciplines in the natural sciences.

TEACHING CREDENTIAL PROGRAM

Both the Bachelor of Arts and Bachelor of Science in Mathematics are approved as single subject teaching credential programs. In order to be recommended for the teaching credential students must complete the requirements of the major as well as certain prerequisites of the teacher education program. Prior to student teaching, students must demonstrate subject matter competence as assessed by the Department of Mathematics. For information about the professional education component, admission to the teacher education program or specific requirements for the single subject waiver program see Page 146 or contact the School of Education C.A.S.E.-Credentials Office.

All Single Subject Waiver programs are being reviewed and may be revised due to changes in Statewide requirements. Students who declare the B.A. or B.S. in Mathematics after January 1995 and who wish to eventually be recommended for acceptance into the teaching credential program must follow the new requirements; these are available in the Mathematics Department Office.

MINOR IN MATHEMATICS

Requirements (36 units)

Requirements for a minor in Mathematics:

Lower-division requirements (24 units)

1. CSci 201. Computer Science I (4)
or
CSci 240. FORTRAN Programming (4)
2. Math 211. Basic Concepts of Calculus (4)
3. Math 212. Calculus II (4)
4. Math 213. Calculus III (4)
5. Math 251. Multivariable Calculus I (4)
6. Math 252. Multivariable Calculus II (4)

Upper-division requirements (12 units)

1. Math 331. Linear Algebra (4)
2. Math 345. Number Theory and Proof (4)
or
Math 355. Analysis and Proof (4)
3. Four units of upper-division elective course work in mathematics chosen from courses applicable to the major.

DEPARTMENTAL HONORS

The department faculty will determine whether a student is to be awarded departmental honors upon graduation. The criteria will be:

1. A grade point average of at least 3.5 in all mathematics courses taken at this university and counted toward fulfilling requirements of the mathematics major.
2. At least four units of Math 595. Independent Study, completed with a grade of "A-" or better, and culminating in a presentation to the department.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed (a) to impart specified professional/vocational/career competencies; or (b) to produce mastery of the content of a sub-field of an academic major (discipline); or (c) to provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Refer to Page 66 for additional certificate information.

Certificate in Teaching Basic Mathematics

Admission to the Program

1. A valid California teaching credential in a subject other than mathematics.

Certificate Requirements (32 units)

Lower-division requirements (20 units)

1. Math 110. College Algebra (4)
2. Math 115. The Ideas of Mathematics (4)
3. Math 120. Pre-Calculus Mathematics (4)
4. Math 129. Geometry in Two and Three Dimensions (4)
5. Math 211. Basic Concepts of Calculus (4)

Upper-division requirements (12 units)

1. Math 301. Basic Mathematics for Educators (4)
2. Math 302. Problem Solving in Mathematics (4)
3. Math 305. Statistics: Hypothesis Testing and Estimation (4)

or

Math 499. Teaching Mathematics (4)

Note: With departmental permission mathematics courses with a calculus prerequisite may be substituted for any of the following:

- | | |
|-----------|---|
| Math 110. | College Algebra |
| Math 120. | Pre-Calculus Mathematics |
| Math 305. | Statistics: Hypothesis Testing and Estimation |

COURSE OFFERINGS IN MATHEMATICS(Math)

Lower Division

70. Fundamental Arithmetic

Fundamental topics in arithmetic, including a preview of algebra. Units awarded for Mathematics 70 are not applicable to a baccalaureate degree. Graded A, B, C/No credit. (4 units)

75. Basic Mathematics

A full year course designed specifically for students who score at or within the lowest quartile on the Entry Level Mathematics examination. Review of basic mathematics from counting through Algebra I. Natural numbers, integers, rational numbers, decimals, exponents, roots, solving equations, word problems, graphing linear equations, solving systems of linear equations, direct and inverse variation, Pythagorean theorem,

angle measurement and construction, area, perimeter, similarity, congruence. Units awarded for Mathematics 75 are not applicable to a baccalaureate degree. Students can place out of the sequence and enroll in general education mathematics by achieving a passing score on the Entry Level Mathematics examination. Graded credit/no credit.

- A. First Quarter (4 units)
- B. Second Quarter (4 units)
- C. Third Quarter (4 units)

80. Fundamental Algebra (FWS)

Arithmetic operations, linear and quadratic equations, applications and introduction to graphing. Units awarded for Mathematics 80 are not applicable to a baccalaureate degree. Graded A, B, C/No credit. (4 units)

90. Intermediate Algebra (FWS)

Linear and quadratic equations and inequalities, algebraic fractions and rational equations, exponents, radicals and radical equations, applications to word problems. Units awarded for Mathematics 90 are not applicable to a baccalaureate degree. Graded A, B, C/No credit. *Prerequisite:* passage of the Entry Level Mathematics examination or a satisfactory score on the appropriate placement test. (4 units)

110. College Algebra (FWS)

Functional notation, graphs and inverses of linear, polynomial, and rational functions, rational exponents, arithmetic and geometric progressions, logarithmic and exponential functions, systems of linear equations. Graded A, B, C/No credit. *Prerequisite:* passing score on the Entry Level Mathematics examination or passage of Mathematics 90. (CAN MATH 10) (4 units)

115. The Ideas of Mathematics (FWS)

Sets and their applications to topics in discrete mathematics that will include enumeration techniques and finite probability spaces. Formerly Mathematics 100. Graded A, B, C/No credit. *Prerequisite:* passing score on the Entry Level Mathematics examination or passage of Mathematics 90. (CAN MATH 2) (4 units)

120. Pre-Calculus Mathematics (FWS)

Trigonometric functions, trigonometric identities, right angle trigonometry, complex numbers, conic sections, binomial theorem, induction. Graded A, B, C/No credit. *Prerequisite:* satisfactory score on the Entry Level Mathematics examination or passage of Mathematics 110. (CAN MATH 16) (4 units)

129. Geometry in Two and Three Dimensions (W)

Axiomatic foundations of Euclidean geometry and their relation to absolute, affine, and ordered geometry. Isometry and similarity in the Euclidean plane and three-space. Inverse transformations and construction of the real projective plane. May not be taken for credit by students who have received credit for Mathematics 160. *Prerequisites:* knowledge of elementary plane geometry and a satisfactory score on the Entry Level Mathematics examination. (4 units)

180. Critical Thinking Through Problem Solving (FWS)

Logical deduction. Inductive techniques such as analogy and generalization. Choice of appropriate representation, adequacy of given information, and strategic decisions within the problem solving process. Includes examples chosen from a wide variety of sources. (4 units)

192. Methods of Calculus

A short course in calculus with emphasis on applications. *Prerequisite: satisfactory score on the Entry Level Mathematics examination, or passage of Mathematics 110.* This course does not substitute for any course in the calculus sequence Mathematics 211, 212, 213, 251, 252 required for majors in chemistry, computer science, mathematics or physics. (4 units)

211. Basic Concepts of Calculus (FWS)

An introduction to limits and continuity, differentiation of functions in one variable (including trigonometric functions) and antiderivatives with applications. Formerly Mathematics 200. *Prerequisite: satisfactory score on the Entry Level Mathematics examination or passage of Mathematics 120.* (CAN MATH SEQ B) (4 units)

212. Calculus II (FWS)

Techniques and applications of integration, differentiation and integration of transcendental functions. Formerly Mathematics 201. *Prerequisite: Mathematics 211 (or 200) with a grade of "C" or better.* (CAN MATH SEQ B) (4 units)

213. Calculus III (FWS)

Sequences and series, numerical techniques, polar coordinates, parametric equations. Formerly Mathematics 202. *Prerequisite: Mathematics 212 (or 201) with a grade of "C" or better.* (CAN MATH SEQ B) (4 units)

241. Problem Solving in Calculus (FWS)

An approach to solving calculus-based problems incorporating a computer algebra system. Projects will include interpolation, numerical methods, differential equations and graphical approaches. One hour lecture and three hours laboratory. *Prerequisites: some programming experience and Mathematics 212.* Recommended: Mathematics 213. (2 units)

251. Multivariable Calculus I (FWS)

Vectors and vector geometry in two and three dimensions. Elementary linear algebra. Multivariable functions. Partial and directional derivatives. Formerly Mathematics 202. *Prerequisite: Mathematics 212 (or 201) with a grade of "C" or better.* (4 units)

252. Multivariable Calculus II

Differentiation and integration of vector functions with applications, multiple integration, line and surface integrals. Theorems of Green, Gauss and Stokes. Formerly Mathematics 203. *Prerequisites: Mathematics 251, and 213 (or 202) with grades of "C" or better.* (4 units)

262. Applied Statistics (FW)

Basic concepts of probability and statistics. Important probability models such as the binomial, Poisson and normal. Statistical procedures, particularly in relation to estimation, hypothesis testing and modeling. Computer simulations and computations. *Prerequisite: Mathematics 120. Prerequisite or corequisite: Mathematics 211 (or 200).* (4 units)

270. Elementary Differential Equations (FS)

First order equations, second order linear equations, linear equations with constant coefficients, variation of parameters, applications. *Prerequisites: Mathematics 251 and 213 (or 202).* (CAN MATH 24) (4 units)

272. Discrete Mathematics (WS)

Boolean algebra. Computer arithmetic including hexadecimal, octal and binary numeration. Relations and functions. Vectors and matrices. Introduction to graph theory. *Prerequisite: completion of the general education requirement in mathematics.* (CAN CSCI 26) (4 units)

Upper Division**301. Basic Mathematics for Educators (FWS)**

Course designed to produce mastery in the presentation of fundamentals for those who are preparing to instruct others. May not be counted toward fulfilling requirements in the mathematics major. *Prerequisites: completion of the general education requirement in mathematics, written communication, oral communication and critical thinking.* (4 units)

302. Problem Solving in Mathematics (FWS)

Use of induction, analogy, successive approximation and other heuristic techniques, illustrated by means of elementary and recreational problems. May not be counted toward fulfilling requirements in the mathematics major. *Prerequisites: completion of the general education requirements in mathematics, written communication, oral communication and critical thinking.* (4 units)

305. Statistics: Hypothesis Testing and Estimation (FWS)

After a brief introduction to descriptive statistics, course will emphasize hypothesis testing and estimation, using packaged computer programs. May not be taken for credit by students who have received credit for Management Science 210, Mathematics 262 (or 350,) Psychology 210 or Social Sciences 215. *Prerequisite: completion of the general education requirement in mathematics or equivalent preparation.* (4 units)

306. Mathematics, the Language of Science

Introduction to basic calculus with emphasis on its role in the development of the life and physical sciences. Applications include rates of change, growth and velocity. *Prerequisites: Mathematics 120 and at least one four-unit college level course in both physics and biology.* (4 units)

307. Mathematics in Science

Differential equations applied to scientific questions of motion, growth and decay, and populations, including an overview of statistics and data analysis. *Prerequisite: a minimum of one quarter of calculus (Mathematics 192, 211, 306 or equivalent).* (4 units)

331. Linear Algebra (FWS)

Vector spaces over a field, linear dependence, dimension; matrices and systems of linear equations; special matrices and canonical forms; characteristic values and vectors; diagonalization of quadratic forms; applications. A knowledge of a computing language is strongly recommended. *Prerequisite: Mathematics 251 (or 202) or consent of instructor.* (4 units)

345. Number Theory and Proof (FWS)

Techniques of proof and historical topics in classical number theory. Theory of divisibility, primes and linear congruences. Theorems of Fermat, Euler and Wilson. Primitive roots and indices. Number theoretic functions. *Prerequisite: Mathematics 213 (or 202).* (4 units)

355. Analysis and Proof

Introduction to ideas and techniques of proof with an emphasis on analysis. Topics chosen from: logic, set theory, functions, cardinality and analysis. *Prerequisite: Mathematics 213 (or 202).* (4 units)

372. Combinatorics (FWS)

Permutations and combinations, recurrence relations with applications and topics in graph theory. Formerly Mathematics 335. *Prerequisite: Mathematics 213 (or 202) or consent of instructor.* (4 units)

373. Mathematical Methods of Physics I (F)

Vector calculus, Fourier analysis, and ordinary differential equations. Emphasis on techniques applicable to the problems of physics. (Also offered as Physics 373. Students may not receive credit for both.) Formerly Mathematics 310/Physics 310. *Prerequisites: Physics 222 and one of the following: Mathematics 252 (or 202 or 203).* Mathematics 331 is recommended. (4 units)

395. Directed Study

Reading and library research in mathematics conducted under the direction of a faculty member. *Prerequisites: consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

411. Introduction to Mathematical Logic

Propositional and quantificational logic, completeness and consistency results, formal systems, Peano arithmetic, recursive functions, Godel's incompleteness theorem. *Prerequisite: Mathematics 345.* (4 units)

465. Probability Theory

Probability spaces, independence, conditional probability, densities, mass and distribution functions, moments, joint and marginal distributions, moment generating functions, Chebychev's inequality, law of large numbers and other topics. Formerly Mathematics 340. *Prerequisites: Mathematics 372 (or 335) and 252 (or 202).* (4 units)

470. Ordinary Differential Equations (W)

Topics from among: first order equations, linear equations, systems of equations, iterative methods, series solutions, Laplace transformations, applications. Formerly Mathematics 360. *Prerequisites: Mathematics 331 and 270.* (4 units)

473. Mathematical Methods of Physics II (W)

A continuation of Mathematics/Physics 373. Topics covered include functions of a complex variable and partial differential equations. (Also offered as Physics 473. Students may not receive credit for both.) Formerly Mathematics 425/Physics 425. *Prerequisite: Mathematics 373 (or 310) or Physics 373 (or 310).* Mathematics 331 and Physics 223 are strongly recommended. (4 units)

474. Numerical Methods

Introduction to numerical methods for finding solutions of non-linear equations, systems of linear equations and ordinary differential equations. Discussion of errors and numerical instabilities; numerical differentiation; numerical integration. Formerly Mathematics 420. *Prerequisites: Computer Science 201 and Mathematics 331.* (4 units)

499. Teaching Mathematics

Individualized instruction in the methods and materials for the teaching of mathematics. This course requires background preparation at least equivalent to Mathematics 120, 129 or 160 and 302. Students in doubt on this point should consult with the Mathematics department before enrolling. This course may not be counted toward fulfilling requirements of the mathematics major. *Prerequisites: completion of the general education requirements in mathematics, written communication, oral communication and critical thinking.* (4 units)

510. Topics in Mathematics

Study of selected areas of advanced mathematics. May be repeated for credit with consent of instructor as topics change. *Prerequisite: senior or graduate standing.* (4 units)

529. Advanced Geometry

Topics in affine and projective geometry with applications to Euclidean 2 and 3 space and to modern algebra. Formerly Mathematics 539. *Prerequisites: Mathematics 331 and 345.* (4 units)

545. Abstract Algebra I

An introduction to algebraic structures, including groups, rings and fields. Formerly Mathematics 570A. *Prerequisites: Mathematics 331 and 345.* (4 units)

546. Abstract Algebra II

Continuation of Mathematics 545. Formerly Mathematics 570B. *Prerequisite: Mathematics 545 (or 570A).* (4 units)

553. Analysis I

Continuous and differentiable functions, infinite series. Uniform convergence, computation with series, functions represented by integrals, theory of integration. Formerly Mathematics 550A. *Prerequisites: Mathematics 252 (or 203), and 355.* (4 units)

554. Analysis II

Continuation of 553. Formerly Mathematics 550B. *Prerequisite: Mathematics 553 (or 550A).* (4 units)

555. Introduction to Point-Set Topology

Topics to include topological and metric spaces, compactness, product spaces, connectedness, separation properties. Formerly Mathematics 560C. *Prerequisite: Mathematics 355.* (4 units)

557. Complex Variables

Analytic and harmonic functions, power series, Cauchy's Theorem and Cauchy's Formula. Formerly Mathematics 560B. *Prerequisites: Mathematics 252 (or 203), and 355.* (4 units)

565. Mathematical Statistics

Likelihood ratio, estimators, distributions of estimators, theory of hypothesis testing, linear statistical models. Formerly Mathematics 445. *Prerequisite: Mathematics 465 (or 340).* (4 units)

573. Mathematical Methods of Physics III (S)

A continuation of Mathematics/Physics 473 with emphasis on advanced topics relevant to physics. (Also offered as Physics 573. Students may not receive credit for both.) *Prerequisites: Mathematics 331 and Mathematics 473 (or 425) or Physics 473 (or 425).* (4 units)

576. Introduction to Mathematical Models

Topics from linear and probabilistic models, computer simulation, difference and differential equation models. Formerly Mathematics 341. *Prerequisites: Computer Science 201, Mathematics 331 and 465 (or 340).* (4 units)

595. Independent Study

An independent study course for senior mathematics majors. *Prerequisites: Mathematics 331 and 553 (or 550A), a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

MILITARY SCIENCE PROGRAM (ARMY ROTC)

Military Science Office

Health and Physical Education Building, Room 114
880-5533

Military Science Program

Certificate Program

Military Science

FACULTY: F. Schumacher, D. Paik

The military science program is designed to provide an on-campus program for qualified students in all academic majors who desire to serve as an Army officer on active duty or in a local Army Reserve or Guard unit. While students may participate in either undergraduate or graduate studies, the program requires at least two years to complete.

Students who have completed at least basic training in any of the armed services may be eligible to enter the advanced course directly. Other students must complete three to six of the courses in the basic course of study or complete a six-week summer camp prior to entering the advanced course.

Scholarships are available on a competitive basis. All ROTC students receive \$150 per month during the final two years of the program.

MILITARY SCIENCE PROGRAM

Program Requirements

Option I (Four Year Program)

Program Requirements (56 units)

Basic Course of Study (12 units)

One class per quarter for two academic years and includes twelve units as follows:

1. MilS 120. Introduction to Military Science (2)
2. MilS 146D. Outing Skills Activities: Orienteering (2)
3. MilS 146E. Outing Skills Activities: Survival Skills (2)
4. MilS 253. Psychology of Leadership and Management (2)
5. MilS 369B. Military Sociology: American Military Sociology (2)
6. Two units from the following:
 - MilS 325B. American Military Experience: 1919-1942 (2)
 - MilS 325C. American Military Experience: 1942-Present (2)

Advanced Course of Study (12 units)

- MilS 351. Small Unit Operations I (2)
- MilS 352. Small Unit Operations II (2)
- MilS 353. Advanced Military Leadership and Management (2)
- MilS 451. Military Law (2)
- MilS 452. Contemporary Military Policy (2)
- MilS 453. Senior Leadership Seminar (2)

Leadership Laboratory (12 units)

Students must be enrolled in the following each quarter they are enrolled in the ROTC Program:

- MilS 100. Leadership Laboratory (1) for a total of (12)

Note: In addition, a six-week advanced camp is required between the final two years of study.

In addition to the ROTC curriculum, cadets must complete one of each of the following type courses in order to ensure they have an understanding of skills, values, and knowledge beyond the military skills taught by the Military Science staff and the ROTC curriculum. These classes do not substitute for any military science classes and are in addition to the required classes for ROTC cadets.

Additional Requirements (20 units)

1. Computer Literacy

Four units chosen from:

- A. CSci 121. Computer Technology and People (2) and CSci 123. Using Computer Software (2)
- B. CSci 121. Computer Technology and People (2) and CSci 125. Programming in BASIC (2)
- C. Four units chosen from:
 - CSci 298A. Application Software Topics: DBASE III+ (2)
 - CSci 298B. Application Software Topics: CROSSTALK (2)
 - CSci 298C. Application Software Topics: LOTUS (2)
- D. Info 101. Introduction to Information Technology (4)

2. Quantitative Skills

Four units chosen from:

- MSci 210. Applied Business Statistics (4)
- Math 110. College Algebra (4)
- Math 120. Pre-Calculus Mathematics (4)
- Psyc 210. Psychological Statistics (5)
- SSci 215. Statistics for the Social Sciences (4)

3. Management

Four units chosen from:

- Mgmt 302. Management and Organizational Behavior (4)
- Psyc 302. Management and Organizational Behavior (4)

4. National Security Studies

Four units chosen from:

- Hist 421. Economic History of the United States (4)
- Hist 503. Europe Since 1945 (4)
- Hist 556. Foreign Relations of the United States (4)
- NSci 486. Science, Technology and Warfare (4)

- PSci 325. American Foreign Policy (4)
 PSci 400. International Politics (4)
 PSci 484. National Security Policy (4)
5. Written Communications Skills
Four units chosen from:
 Educ 495. Expository Writing for Education (4)
 Eng 495. Expository Writing (4)
 Hum 495. Expository Writing for the Humanities (4)
 Mgmt 495. Expository Writing for Administration (4)
 NSci 495. Expository Writing for the Natural Sciences (4)
 SSci 495. Expository Writing for the Social Sciences (4)

Other classes may be substituted for those listed in each category upon approval of the Military Science staff.

Note: Some of these requirements are fulfilled by general education classes.

Option II (Two Year Program) Program Requirements (48 units)

Basic Course of Study (12 units)

1. MilS 260. ROTC Basic Camp (2)
2. MilS 351. Small Unit Operations I (2)
3. MilS 352. Small Unit Operations II (2)
4. MilS 353. Advanced Military Leadership and Management (2)
5. MilS 451. Military Law (2)
6. MilS 452. Contemporary Military Policy (2)
7. MilS 453. Senior Leadership Seminar (2)

Leadership Laboratory (6 units)

Students must be enrolled in the following each quarter they are enrolled in the ROTC program.

- MilS 100. Leadership Laboratory (1) for a total of (6)

Note: In addition, a six week advanced camp is required between the final two years of study.

In addition to the ROTC Curriculum, cadets must complete one of each of the following type courses in order to ensure they have an understanding of skills, values, and knowledge beyond the military skills taught by the military science staff and the ROTC curriculum. These classes do not substitute for any military science classes and are in addition to the required classes for ROTC cadets.

Additional Requirements (28 units)

1. Computer Literacy

Four units chosen from:

- A. CSci 121. Computer Technology and People (2) and
 CSci 123. Using Computer Software (2)
- B. CSci 121. Computer Technology and People (2) and
 CSci 125. Programming in BASIC (2)
- C. *Four units chosen from:*
 CSci 298A. Application Software Topics: DBASE III+ (2)
 CSci 298B. Application Software Topics: CROSSTALK (2)
 CSci 298C. Application Software Topics: LOTUS (2)

- D. Info 101. Introduction to Information Technology (4)

2. Human Behavior

Four units chosen from:

- Anth 100. Introduction to Anthropology: Human Evolution (4)
 Anth 102. Introduction to Anthropology: Culture and Society (4)
 Psyc 115. Personal and Social Adjustment (2)
 Soc 100. The Study of Society (4)
 Soc 312. Contemporary Sociological Theory (4)

Choose one of the following two courses:

- Soc 369A. Military Sociology: Comparative Military Sociology (2)
 Soc 369B. Military Sociology: American Military Sociology (2)

3. Management

Four units chosen from:

- Mgmt 302. Management and Organizational Behavior (4)
 Psyc 302. Management and Organizational Behavior (4)

4. Military History

Four units chosen from a or b:

- a. MilS 325B. American Military Experience: 1919-1942 (2)
 MilS 325C. American Military Experience: 1942-Present (2)
- b. MilS 603. Seminar in Modern Military History (4)

5. National Security Studies

Four units chosen from:

- Hist 421. Economic History of the United States (4)
 Hist 503. Europe Since 1945 (4)
 Hist 556. Foreign Relations of the United States (4)
 NSci 486. Science, Technology and Warfare (4)
 PSci 325. American Foreign Policy (4)
 PSci 400. International Politics (4)
 PSci 484. National Security Policy (4)

6. Quantitative Skills

Four units chosen from:

- MSci 210. Applied Business Statistics (4)
 Math 110. College Algebra (4)
 Math 120. Pre-Calculus Mathematics (4)
 Psyc 210. Psychological Statistics (5)
 SSci 215. Statistics for the Social Sciences (4)

7. Written Communications Skills

Four units chosen from:

- Educ 495. Expository Writing for Education (4)
 Eng 495. Expository Writing (4)
 Hum 495. Expository Writing for the Humanities (4)
 Mgmt 495. Expository Writing for Administration (4)
 NSci 495. Expository Writing for the Natural Sciences (4)
 SSci 495. Expository Writing for the Social Sciences (4)

Other classes may be substituted for those listed in each category upon approval of the military science staff.

Note: Some of these requirements are fulfilled by general education classes.

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Military Science

Certificate Requirements (24 units)

1. MilS 325A. American Military Experience: 1860-1918 (2)
2. MilS 325B. American Military Experience: 1919-1942 (2)
3. MilS 325C. American Military Experience: 1942-Present (2)
4. Mgmt 302. Management and Organizational Behavior (4)
or
Psys 302. Management and Organizational Behavior (4)
5. MilS 369A. Military Sociology: Comparative Military Sociology (2)
or
Soc 369A. Military Sociology: Comparative Military Sociology (2)
6. MilS 369B. Military Sociology: American Military Sociology (2)
or
Soc 369B. Military Sociology: American Military Sociology (2)
7. PSci 484. National Security Policy (4)
8. *Six units chosen from:*
 - PE 146A. Outing Skills Activities: Backpacking (2)
 - PE 146B. Outing Skills Activities: Camping (2)
 - PE 146C. Outing Skills Activities: Mountaineering (2)
 - PE 146D. Outing Skills Activities: Orienteering (2)
 - or
 - MilS 146D. Outing Skills Activities: Orienteering (2)
 - PE 146E. Outing Skills Activities: Survival Skills (2)
 - or
 - MilS 146E. Outing Skills Activities: Survival Skills (2)

COURSE OFFERINGS IN MILITARY SCIENCE (MILS)

Lower Division

100. Leadership Laboratory

Practicum in those skills taught in the classroom during other military science classes in the quarter. To include Small Unit Operations, such as patrolling, air mobile operations, rappelling and weapons qualification. Some training is conducted on weekends. This course is only open to enrolled Army ROTC cadets. The course must be taken each quarter the student is enrolled in the Military Science program. (1 unit)

120. Introduction to Military Science

Introduction to the role of the officer and noncommissioned officer, organization of the total army, customs and traditions of the army, leadership, organization of the Department of Defense, and Soviet military organization. (2 units)

146. Outing Skills Activities

Introduction and practice to basic skills, equipment, and safety techniques common to the spectrum of outdoor/wilderness activities.

D. Orienteering (Also offered as Physical Education 146D. Students may not receive credit for both.) (2 units)

E. Survival Skills (Also offered as Physical Education 146E. Students may not receive credit for both.) (2 units)

253. Psychology of Leadership and Management

Psychological theories, models and concepts as applied to the practice of leadership and management. (2 units)

260. ROTC Basic Camp

ROTC Basic Camp is a six week course at FT Knox, KY. The basic camp offers students with no prior military training, or ROTC classes, the chance to enter the ROTC advanced program, if the student has two or more years of undergraduate or graduate study remaining. It is comparable to the first two years of the ROTC program. *Prerequisite: consent of Military Science Department advisor.* (2 units)

Upper Division

325. American Military Experience

American military development from the Civil War to the present day.

A. 1860-1918 (Also offered as History 325A. Students may not receive credit for both.) (2 units)

B. 1919-1942 (Also offered as History 325B. Students may not receive credit for both.) (2 units)

C. 1942-Present (Also offered as History 325C. Students may not receive credit for both.) (2 units)

351. Small Unit Operations I

Current tactical doctrine as applied to small unit operations. *Prerequisite: consent of instructor.* (2 units)

352. Small Unit Operations II

Continuation of current tactical doctrine as applied to small unit operations, with special attention to the leader's role.

Prerequisite: Military Science 351. (2 units)

353. Advanced Military Leadership and Management

Leadership skills required of an ROTC cadet at advanced camp and as a junior officer in the armed forces. *Prerequisite:* *Military Science 352.* (2 units)

369. Military Sociology

Interrelationships between the civilian and military sector.

- A. Comparative Military Sociology (Also offered as Sociology 369A. Students may not receive credit for both.) (2 units)
- B. American Military Sociology (Also offered as Sociology 369B. Students may not receive credit for both.) (2 units)

451. Military Law

Military justice system, including a history of military law, philosophy and structure of the military justice system, courts-martial and alternatives to courts-martial. *Prerequisite:* *consent of instructor.* (2 units)

452. Contemporary Military Policy

Contemporary military policy and related subjects of topical military interest, including personal ethics, relevant to the training of junior-level officers. *Prerequisite:* *consent of instructor.* (2 units)

453. Senior Leadership Seminar

Leadership and management problems encountered in a company-sized unit, both in garrison and in the field, with emphasis on role of the junior officer. *Prerequisite:* *consent of instructor.* (2 units)

MUSIC

Department of Music

Creative Arts Building, Room 111
880-5859

Bachelor of Arts

Music

Option I: Music Education

Option II: Specialized Music Studies

Option III: General Music Studies

Teaching Credential Program

Music

Minor

Music

Recording Arts

FACULTY: Edward Bostley, Loren Filbeck (Chair),
Luis Gonzalez, Tamara Harsh, Larry McFatter,
Cynthia Pastrana, Jerrold Pritchard

The contemporary musician has a potential access to more kinds of music than ever before in history. The music curriculum—with courses in electronic music, performance, world music, historical studies, music education and integrated theory—reflects that diversity in that it offers programs for the student who wishes to enter the teaching profession, become a professional musician, pursue an advanced degree, or simply enrich his or her education.

Admission to the B.A. in Music, upon the approval of the music faculty, is based on: (1) a theory placement examination (proficiency in music fundamentals equal to that of Music 100. Basic Musicianship), (2) a piano proficiency audition, and (3) an applied music audition (performance proficiency equal to collegiate applied music at the 240-247 level).

Prospective music composition majors will be required to complete at least one year of applied vocal or instrumental music instruction (Mus 240-245) prior to acceptance into applied composition instruction (Mus 246).

Students whose performance competencies are deemed deficient by the music faculty will be required to enroll in preparatory applied music instruction (at the 80-85 level). Students will be permitted to enroll in preparatory applied music instruction for a total of three units. Units awarded for preparatory applied music instruction are not applicable to the music program nor a baccalaureate degree. These courses are graded credit/no credit.

Music majors will be required to present a public senior recital or project. Option II majors will be required to present a junior recital or project. The presentation of a recital must be approved by the faculty at least 10 weeks prior to the proposed presentation date. At that time a list of probable repertoire or outline of the project must be submitted.

Four weeks prior to the public performance, the student will present the proposed recital or project for faculty approval.

B.A. IN MUSIC

Requirements (96 units)

Requirements for the B.A. in Music:

1. Music theory (24 units)
 - Mus 111. Theory I (4)
 - Mus 112. Theory II (4)
 - Mus 313. Theory III (4)
 - Mus 314. Theory IV (4)
 - Mus 315. Theory V (4)
 - Mus 542. Studies in Musical Organization (4)
2. Music history (12 units)
 - Mus 304. History of Music I (4)
 - Mus 305. History of Music II (4)
 - Mus 306. History of Music III (4)
3. Conducting (2 units)
 - Mus 210. Conducting (2)
4. Piano proficiency *must be demonstrated by completing one of the following:*
 - A. Mus 222. Class Piano III (with a grade of "B" or better) (1)
 - B. Successful completion of the piano proficiency examination administered by the department.
5. Concert attendance:
 - Six quarters of Music 998. Concert Attendance; at least eight Music Department concerts, recitals and related programs must be attended per quarter.
6. *Fifty-eight units chosen from Option I, II or III below:*

Option I: Music Education

- A. Mus 201A. Class Strings I (1)
- B. Mus 201B. Class Strings II (1)
- C. Mus 202A. Class Woodwinds I (1)
- D. Mus 202B. Class Woodwinds II (1)
- E. Mus 203A. Class Brass I (1)
- F. Mus 203B. Class Brass II (1)
- G. Mus 204A. Class Percussion I (1)
- H. Mus 204B. Class Percussion II (1)
- I. Mus 205A. Class Guitar I (1)
- J. Mus 205B. Class Guitar II (1)
- K. *One of the following:*
 - Mus 206. Class Voice (1)
 - Mus 207. Diction for Singers (1) (for voice emphasis students)
- L. Mus 208. Vocal Music Literature (1)
- M. Mus 209. Instrumental Music Literature (1)
- N. Mus 301. Choral Conducting (2)
- O. Mus 303. Instrumental Conducting (2)
- P. Mus 350. Music of Other Cultures (4)
- Q. *Four units chosen from:*
 - Mus 400. Studies in Composers (4)
 - Mus 402. Studies in Genres (4)
 - Mus 426. Studies in Music History (4)
- R. Mus 406. Orchestration (2)
- S. Mus 408. Arranging (2)
- T. Mus 410. Music in the Elementary Schools (4)
- U. Mus 411. Teaching Music in Secondary Schools (4)
- V. Mus 412. Marching Band Techniques (2)

- W. Mus 535. Computer Studies for Music Teachers (4)
- X. Advanced applied music
Three units chosen from:
- Mus 440. Upper-Division Voice (1) for a total of (3)
 - Mus 441. Upper-Division Keyboard Instrument (1) for a total of (3)
 - Mus 442. Upper-Division String Instrument (1) for a total of (3)
 - Mus 443. Upper-Division Wind Instrument (1) for a total of (3)
 - Mus 444. Upper-Division Brass Instrument (1) for a total of (3)
 - Mus 445. Upper-Division Percussion Instrument (1) for a total of (3)
 - Mus 446. Upper-Division Composition (1) for a total of (3)
 - Mus 447. Upper-Division Synthesizer (1) for a total of (3)
- Y. Participation in one of the major performance organizations most appropriate to the student's applied emphasis is required each quarter in residence with a maximum of twelve units being applied to the major:
- Mus 380. Chamber Orchestra (1) *for String Instrument Major*
 - Mus 381. Symphonic Band (1) *for Wind and Percussion Major*
 - Mus 385. Concert Choir (1) *for Vocal Major*
 - Mus 391. Jazz Ensemble (1) *(option III only)*
- Z. *One of the following:*
- Mus 993. Senior Project (0)
 - Mus 996. Senior Recital (0)

Option II: Specialized Music Studies

- A. Mus 208. Vocal Music Literature (1)
- B. Mus 209. Instrumental Music Literature (1)
- C. Mus 301. Choral Conducting (2)
- D. Mus 303. Instrumental Conducting (2)
- E. *Eight units chosen from:*
 - Mus 400. Studies in Composers (4)
 - Mus 402. Studies in Genres (4)
 - Mus 426. Studies in Music History (4)
- F. *Four units chosen from:*
 - Mus 266. Introduction to Computer and Electronic Music (4)
 - Mus 267. Introduction to Studio Recording Techniques (4)
 - Mus 416. Advanced Computer and Electronic Music (4)
 - Mus 427. Advanced Studio Recording Techniques (4)
 - Mus 535. Computer Studies for Music (4)
- G. Mus 406. Orchestration (2)
- H. Mus 408. Arranging (2)
- I. World music
Four units chosen from:
 - Mus 350. Music of Other Cultures (4)
 - Mus 351. Latin American Music (4)

- Mus 352. Afro-American Music (4)
- Mus 360. Music in the United States (4)
- J. Seventeen units of course work in music chosen from 300-, 400- or 500-level courses.
- K. Advanced applied music
Three units chosen from:
 - Mus 440. Upper-Division Voice (1) for a total of (3)
 - Mus 441. Upper-Division Keyboard Instrument (1) for a total of (3)
 - Mus 442. Upper-Division String Instrument (1) for a total of (3)
 - Mus 443. Upper-Division Wind Instrument (1) for a total of (3)
 - Mus 444. Upper-Division Brass Instrument (1) for a total of (3)
 - Mus 445. Upper-Division Percussion Instrument (1) for a total of (3)
 - Mus 446. Upper-Division Composition (1) for a total of (3)
 - Mus 447. Upper-Division Synthesizer (1) for a total of (3)
- L. Participation in one of the major performance organizations most appropriate to the student's applied emphasis is required each quarter in residence with a maximum of twelve units being applied to the major:
 - Mus 380. Chamber Orchestra (1) *for String Instrument Major*
 - Mus 381. Symphonic Band (1) *for Wind and Percussion Major*
 - Mus 385. Concert Choir (1) *for Vocal Major*
 - Mus 391. Jazz Ensemble (1) *(option III only)*
- M. *One of the following:*
 - Mus 992. Junior Project (0)
 - Mus 995. Junior Recital (0)
- N. *One of the following:*
 - Mus 993. Senior Project (0)
 - Mus 996. Senior Recital (0)

Option III: General Music Studies

- A. Mus 208. Vocal Music Literature (1)
- B. Mus 209. Instrumental Music Literature (1)
- C. *Eight units chosen from:*
 - Mus 400. Studies in Composers (4)
 - Mus 402. Studies in Genres (4)
 - Mus 416. Advanced Computer and Electronic Music (4)
 - Mus 426. Studies in Music History (4)
 - Mus 427. Advanced Studio Recording Techniques (4)
 - Mus 428. Analog and Digital Synthesis (4)
 - Mus 535. Computer Studies for Music Teachers (4)
- D. Six units in applied music at the 200-level.
- E. Performance Ensemble:
Six units chosen from:
 - Mus 380. Chamber Orchestra (1)
 - Mus 381. Symphonic Band (1)
 - Mus 385. Concert Choir (1)
 - Mus 386. Chamber Singers (1)

- Mus 389. Wind Ensemble (1)
 Mus 391. Jazz Ensemble (1)
 F. Twenty-four units of a traditional minor or 24 units of an interdisciplinary package approved by the department:
Traditional minor in Business, Theatre Arts, Computer Science, Recording Arts, History, English, Foreign Languages, etc.
 or
Interdisciplinary package:
 •Music/Theatre
 •Arts Administration
 •Performance Arts (Music/Art/Drama/Dance)
 •Electronic Music/Computer Science/Communication
 •Art History/Film History/Music History/Drama History/General Cultural History, etc.
 G. Eight units of upper-division electives chosen from music or the minor area.
 H. Mus 528. Special Projects (4)
 I. Mus 993. Senior Project (0)

TEACHING CREDENTIAL PROGRAM

Students wishing to be recommended for the single subject teaching credential in music must complete the core requirements and Option II of the major in music, as well as certain prerequisites to the teacher education program. For information about the professional education component of the credential program, admission to the teacher education program and specific requirements for the single subject waiver program see Page 148 of this catalog, or contact the School of Education C.A.S.E. Credentials Office.

MINOR IN MUSIC

Requirements (28 units)

Requirements for a minor in Music:

1. Mus 111. Theory I (4)
2. Mus 112. Theory II (4)
3. Mus 180. Studies in Music (4)
4. Mus 208. Vocal Music Literature (1)
5. Mus 209. Instrumental Music Literature (1)
6. Mus 220. Class Piano I (1)
7. Mus 221. Class Piano II (1)
8. World music
Four units chosen from:
 Mus 350. Music of Other Cultures (4)
 Mus 351. Latin American Music (4)
 Mus 352. Afro-American Music (4)
 Mus 360. Music in the United States (4)
9. *Four units chosen from:*
 Mus 266. Introduction to Computer and Electronic Music (4)
 Mus 267. Introduction to Studio Recording Techniques (4)

- Mus 416. Advanced Computer and Electronic Music (4)
 Mus 427. Advanced Studio Recording Techniques (4)
 Mus 535. Computer Studies for Music Teachers (4)
 10. Four units in music courses at the upper-division level.

MINOR IN RECORDING ARTS

Requirements (28 units)

Requirements for a minor in Recording Arts:

1. Mus 111. Theory I (4)
Option III Music Majors must substitute:
 Mus 266. Introduction to Computer and Electronic Music (4)
2. Mus 112. Theory II (4)
Option III Music Majors must substitute:
 Mus 267. Introduction to Studio Recording Techniques (4)
3. Mus 416. Advanced Computer and Electronic Music (4)
4. Mus 427. Advanced Studio Recording Techniques (4)
5. *Four units chosen from:*
 Mus 414. Commercial Arranging (4)
 Mus 428. Analog and Digital Synthesis (4)
6. Eight units in computer and electronic music and recording techniques, which may include, for non-music majors, Music 266, 267, or 528, or for Option III Music Majors, Music 528.

HONORS IN PERFORMANCE

Honors in Performance is a continuous six-quarter program designed specifically for upper-division students who show particular distinction as performers and who demonstrate exceptional promise for future growth.

Students admitted to the program will work with their applied music instructors to develop an approved program of study which will be reviewed each quarter by the faculty. Honors students will present a public junior and senior recital.

Upon completion of the program, Honors in Performance will be noted on the student's transcript and successful candidates will be publicly recognized in a special honors concert.

The following criteria and procedures have been established:

1. Candidates will be accepted into the program upon recommendation of the studio instructor and the approval of the music faculty;
2. Entering students must show evidence of previous training, experience and quality of work;
3. A long-range program of instruction will be arranged between the student and the instructor. This program, taking into consideration the student's present capability and future potential, will be designed to include literature necessary for continued growth, as well as including

works considered necessary to musical literacy. Student progress in the program will be evaluated each quarter by the department;

4. Honors candidates are expected to perform in public with reasonable regularity;
5. Candidates who have successfully completed five quarters in the program will then register for Music 994. Honors in Performance in their sixth quarter;
6. During their senior year honors students will register for Music 997. Honors Recital in lieu of Music 996. Senior Recital.

The department has a number of performance groups open to all students. The nature of these groups makes it essential that students register for a minimum of two or more successive quarters in any one ensemble.

COURSE OFFERINGS IN MUSIC (Mus)

THEORY

The integrated music theory courses are the core of a program which seeks to develop in the student ability to cope with any aural experience. The courses deal with the materials of music and how they combine to create musical structures, analysis of representative works and continued development of the musical ear and keyboard facility. Designed primarily for the music major and the liberal arts student with a serious interest in music.

Lower Division

100. Basic Musicianship

Rudiments of music: pitch, rhythm, scales, melody, sightsinging, dictation and introductory keyboard activity. Credits may not be counted toward fulfilling the requirements of the music major. Three hours lecture and three hours laboratory. (4 units)

111. Theory I

Basic materials of music and how they combine to create musical structures. Analysis of representative works is combined with creative work in counterpoint and harmony, together with sightsinging, ear training and keyboard harmony. Three hours lecture and three hours laboratory. *Prerequisite: Music 100 or equivalent or placement examination.* (4 units)

112. Theory II

Continuation of Music 111. Three hours lecture and three hours laboratory. *Prerequisite: Music 111 or equivalent or consent of instructor.* (4 units)

Upper Division

313. Theory III

Melody, harmony and texture as they relate to musical structure; extension of tonality and its eventual evolution into 20th century practice; analysis of representative compositions; continuation of sightsinging, ear and keyboard training. Three hours lecture and three hours laboratory. *Prerequisite: Music 112 or equivalent, or consent of instructor.* (4 units)

314. Theory IV

Continuation of Music 313. Three hours lecture and three hours laboratory. *Prerequisite: Music 313 or equivalent or consent of instructor.* (4 units)

315. Theory V

Continuation of Music 314. Three hours lecture and three hours laboratory. *Prerequisite: Music 314 or equivalent or consent of instructor.* (4 units)

542. Studies in Musical Organization

Intensive study of aspects of musical organization: tonal, melodic and rhythmic. *Prerequisite: satisfactory completion of Music 315 or equivalent.* (4 units)

HISTORY AND LITERATURE

These courses are concerned with musical ideas and styles, as well as social and aesthetic factors influencing sounds composers ultimately preferred and organized.

Lower Division

180. Studies in Music

Exploration of the elements of music and the nature of meaning and musical style, with emphasis on listening and analysis. (4 units)

208. Vocal Music Literature

A survey of major works of solo and ensemble vocal literature. (1 unit)

209. Instrumental Music Literature

A survey of major works of solo and ensemble instrumental literature. (1 unit)

225. Music in the Theatre

A survey of music as it is allied with drama, dance and film. (4 units)

235. Popular Music Literature

A survey of the contributions of operetta, show-tune styles, gospel music, the blues, "standards" of the 30's and 40's, folk and country music, rhythm-and-blues, early rock-and-roll, and the more contemporary and progressive styles of rock, pop and new wave music to twentieth century American popular culture. (4 units)

Upper Division

304. History of Music I

Development of Western music from antiquity through the Renaissance, with emphasis on analysis, listening and individual study. *Prerequisite: Music 112 or consent of instructor.* (4 units)

305. History of Music II

Continuation of Music 304. Baroque to the late nineteenth century. *Prerequisite: Music 112 or consent of instructor.* (4 units)

306. History of Music III

Continuation of Music 305. Late Romantic to the present. *Prerequisite: Music 112 or consent of instructor.* (4 units)

308. Women in Music

Contributions of women to the occidental and non-Western musical heritage in the areas of composition, performance and dance. (4 units)

400. Studies in Composers

Intensive study into works of a particular composer. Content will vary. May be repeated for credit as topics change. (4 units)

402. Studies in Genres

Intensive study into a particular genre or form, such as symphony, concerto, oratorio, opera. Content will vary. May be repeated for credit as topics change. (4 units)

406. Orchestration

Instrumental literature and orchestration, including study of the instruments of the orchestra and writing for instrumental groups. *Prerequisite: Music 112 or consent of instructor.* (2 units)

408. Arranging

Continuation of Music 406. Techniques of arranging for instrumental and vocal groups. *Prerequisite: Music 406 or consent of instructor.* (2 units)

426. Studies in Music History

Intensive study in selected style periods of music. May be repeated for credit as topics change. (4 units)

510. Special Topics in Music

Areas of special interest in the various fields of music selected for special presentation and development. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (4 units)

WORLD MUSIC

The following courses are concerned with music as it has developed and as it exists in various cultures of the world. Courses include background necessary to enable the student to understand the role of music in particular societies. Visiting faculty and guest musicians when possible. No prerequisites. Non-music majors encouraged to enroll.

Upper Division**350. Music of Other Cultures**

Offered either as a survey of world music or as an intensive study into the music of a particular country or region. May be repeated for credit. (4 units)

351. Latin American Music

An overview of the history and current performance practices of classical, folk, and popular music of Latin America. (4 units)

352. Afro-American Music

Historical development of the Afro-American musical heritage. (4 units)

360. Music in the United States

Primarily concerned with music not directly related to Western European classical traditions: folk heritage and blues tradition. (4 units)

COMPOSITION

Working creatively with sound in a relatively unstructured situation. Experimentation is encouraged, based on individual abilities and preferences.

Upper Division**266. Introduction to Computer and Electronic Music**

An introduction to the history, development and practice of computer and electronic music. Non-majors are encouraged to enroll. (4 units)

416. Advanced Computer and Electronic Music

Intensive study in the history, development and practice of computer and electronic music. *Prerequisite: Music 266 or consent of instructor.* (4 units)

COMMERCIAL MUSIC**Upper Division****267. Introduction to Studio Recording Techniques**

Introductory course dealing with microphone techniques, aspects of recording, multi-tracking, mix-down and editing. (4 units)

414. Commercial Arranging

Arranging and composition techniques for groups of varied instrumentation, incorporating concepts of jazz and commercial applications. *Prerequisites: Music 406 and 408 or consent of instructor.* (2 units)

417. Composition for Films and Television

Study of the aesthetic, psychological and practical techniques involved in composing music for films and television. *Prerequisite: Music 414 or consent of instructor.* (4 units)

427. Advanced Studio Recording Techniques

Intensive course dealing with microphone techniques, aspects of recording, multi-tracking, mix-down and editing. *Prerequisite: Music 267 or consent of instructor.* (4 units)

428. Analog and Digital Synthesis

Programming analog and digital synthesizers, drum machines, sequencers, microcomputers and other hardware. Opportunities for hands-on experience. *Prerequisite: Music 416 or consent of instructor.* (4 units)

INDEPENDENT STUDY**Upper Division****528. Special Projects**

Individual projects in orchestration, conducting and score reading, theory, history, composition, electronic music. May be repeated for credit. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

628. Special Projects

Individual projects in orchestration, conducting and score reading, theory, history, composition, electronic music.

Prerequisites: graduate standing and consent of instructor.
(Credit to be arranged: 1 to 4 units)

MUSIC EDUCATION

The following courses are designed for the prospective elementary and secondary school teacher.

Lower Division

201. Class Strings

- A. I: Beginning study on violin, viola, cello and bass. (1 unit)
- B. II: Continued study on violin, viola, cello and bass.

Prerequisite: Music 201A. (1 unit)

202. Class Woodwinds

- A. I: Beginning study on selected woodwinds. (1 unit)
- B. II: Continued study on selected woodwinds. *Prerequisite:*

Music 202A. (1 unit)

203. Class Brass

- A. I: Beginning study on selected brass instruments. (1 unit)
- B. II: Continued study on selected brass instruments.

Prerequisite: Music 203A. (1 unit)

204. Class Percussion

- A. I: Beginning study of percussion instruments. (1 unit)
- B. II: Continued study of percussion instruments. *Prerequisite:*

Music 204A. (1 unit)

205. Class Guitar

- A. I: Beginning study of guitar. (1 unit)
- B. II: Continued study of guitar. *Prerequisite: Music 205A.*

(1 unit)

206. Class Voice

Fundamentals of singing, voice production and diction. (1 unit)

207. Diction for Singers

Proper diction and pronunciation used in English, Latin, Italian, French and German vocal literature. Examples drawn from standard vocal literature. (1 unit)

210. Conducting

Introduction to basic conducting techniques. (2 units)

216. Class Recorder I

Beginning study on the soprano and tenor recorder. (1 unit)

217. Class Recorder II

Intermediate study of the recorder using the alto and bass recorders. *Prerequisite: Music 216 or consent of instructor.* (1 unit)

220. Class Piano I

Basic keyboard techniques, including music reading, keyboard harmony and improvisation. Credit may not be counted toward fulfilling requirements of the music major. (1 unit)

221. Class Piano II

Basic keyboard techniques, including music reading, keyboard harmony and improvisation. Credit may not be counted toward fulfilling requirements of the music major. (1 unit)

222. Class Piano III

Basic keyboard techniques, including music reading, keyboard harmony and improvisation. Credit may not be counted toward fulfilling requirements of the music major. (1 unit)

Upper Division

301. Choral Conducting

Techniques and skills employed in the performance of choral literature. *Prerequisite: Music 210.* (2 units)

302. Music Theatre Production

(2 units)

303. Instrumental Conducting

Techniques and skills employed in the performance of instrumental literature. *Prerequisite: Music 210.* (2 units)

410. Music in the Elementary Schools

Materials and objectives in teaching music at the elementary school, including specialized instrumental and choral programs, singing and listening activities, and the use of simple instruments appropriate to child growth and development. Field work is included. *Prerequisite: Music 315 or consent of instructor.* (4 units)

411. Teaching Music in Secondary Schools

Materials and objectives for teaching music in the secondary schools, including specialized instrumental and choral programs. Field work is included. *Prerequisite: Music 315 or consent of instructor.* (4 units)

412. Marching Band Techniques

Marching fundamentals, charting for field shows, precision drills, parade techniques, materials and administration for marching band. *Prerequisite: Music 315 or consent of instructor.* (2 units)

513. Orff Schulwerk Level I

Music learning and teaching through the application of the Orff Schulwerk approach. *Prerequisite: consent of instructor.* (4 units)

514. Orff Schulwerk Level II

Music learning and teaching through the application of the Orff Schulwerk approach. *Prerequisite: Music 513.* (4 units)

516. Teaching Recorder in the Elementary Classroom I

Development of personal performance skills on the soprano and tenor recorders as well as developing instructional skills in teaching these recorders in the elementary schools. (2 units)

517. Teaching Recorder in the Elementary Classroom II

Development of personal performance skills on the alto and bass recorders as well as developing instructional skills in teaching these recorders in the elementary school. *Prerequisite: Music 516.* (2 units)

519. Audio Production

Methods for creating appropriate musical/audio instructional materials using basic audio production equipment. Does not count toward the music major. (2 units)

531. Musical Development for the Elementary Teacher

A correlated study of basic music theory, piano and vocal technique and classroom skills. Designed for the elementary teacher. Not open to majors in music. (4 units)

535. Computer Studies for Music Teachers

This course is intended for music teachers who wish to become familiar not only with hardware, music software, and basic computer music operations, but also with the specific uses of computer technology in the music classroom. *Prerequisite: Computer Science 127.* (4 units)

550. Music in the Elementary Classroom

Development of musical goals, behavioral objectives, teaching strategies, and the writing of lesson plans for music in the elementary schools, K-6. May not be counted toward fulfilling requirements in the major. *Prerequisite: Music 100 or 531 or consent of instructor.* (4 units)

570. Music Creativity for the Elementary Classroom

Composing music and lyrics for the elementary classroom using typical school instruments. *Prerequisite: Music 100, or 531, or consent of instructor.* (4 units)

APPLIED MUSIC

Music majors are required to take a minimum of three units of applied music at the upper-division level. Permission to register in either lower- or upper-division applied music lessons can be granted only after a placement audition and the approval of the full-time music faculty. Applied music lessons are available to music majors only. Music majors who wish additional applied lesson time are encouraged to enroll through Open University. Students in other majors may enroll in applied music lessons through Open University depending on faculty availability.

For students planning a career in music education, it is strongly recommended that, in addition to the three-unit requirement on a major instrument, three units of applied music study on a secondary instrument be included.

All music majors are required to study on their major instrument each quarter they are in residence. All applied music lessons constitute a one-half hour private instruction each week for the ten-week term.

The following preparatory applied music courses are open only to prospective music majors whose performance proficiency is below the collegiate level of Mus 240-247.

Applied instruction at the preparatory Mus 80-85 level does not apply toward the degree or major. Enrollment in Preparatory Applied Music 80-85 is permitted for a maximum of three units.

Mus 80. Preparatory Voice (1)

Mus 81. Preparatory Piano (1)

Mus 82. Preparatory String Instrument

A. Violin (1)

B. Viola (1)

C. Bass (1)

D. Guitar (1)

Mus 83. Preparatory Wind Instrument

A. Flute (1)

B. Clarinet (1)

C. Oboe (1)

D. Bassoon (1)

E. Saxophone (1)

Mus 84. Preparatory Brass Instrument

A. Trumpet (1)

B. Horn (1)

C. Trombone (1)

D. Tuba (1)

Mus 85. Preparatory Percussion (1)

80. Preparatory Voice

One-half hour per week of private instruction. Open only to prospective music majors whose performance proficiency is below the collegiate level of Music 240. Credit does not apply toward the degree or major. May be repeated for a maximum of three units. Graded credit/no credit. (1 unit)

81. Preparatory Piano

One-half hour per week of private instruction. Open only to prospective music majors whose performance proficiency is below the collegiate level of Music 241. Credit does not apply toward the degree or major. May be repeated for a maximum of three units. Graded credit/no credit. (1 unit)

82. Preparatory String Instrument

One-half hour per week of private instruction. Open only to prospective music majors whose performance proficiency is below the collegiate level of Music 242. Credit does not apply toward the degree or major. May be repeated for a maximum of three units. Graded credit/no credit.

A. Violin (1 unit)

B. Viola (1 unit)

C. Cello (1 unit)

D. Bass (1 unit)

E. Guitar (1 unit)

83. Preparatory Wind Instrument

One-half hour per week of private instruction. Open only to prospective music majors whose performance proficiency is below the collegiate level of Music 243. Credit does not apply toward the degree or major. May be repeated for a maximum of three units. Graded credit/no credit.

A. Flute (1 unit)

B. Clarinet (1 unit)

C. Oboe (1 unit)

D. Bassoon (1 unit)

E. Saxophone (1 unit)

84. Preparatory Brass Instrument

One-half hour per week of private instruction. Open only to prospective music majors whose performance proficiency is below the collegiate level of Music 244. Credit does not apply toward the degree or major. May be repeated for a maximum of three units. Graded credit/no credit.

- A. Trumpet (1 unit)
- B. Horn (1 unit)
- C. Trombone (1 unit)
- D. Tuba (1 unit)

85. Preparatory Percussion

One-half hour per week of private instruction. Open only to prospective music majors whose performance proficiency is below the collegiate level of Music 245. Credit does not apply toward the degree or major. May be repeated for a maximum of three units. Graded credit/no credit. (1 unit)

Lower Division

The following music courses are available to undergraduate music majors only:

240. Lower-Division Voice

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty. (1 unit)

241. Lower-Division Keyboard Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Piano (1 unit)
- B. Organ (1 unit)
- C. Harpsichord (1 unit)

242. Lower-Division String Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Violin (1 unit)
- B. Viola (1 unit)
- C. Cello (1 unit)
- D. Bass (1 unit)
- E. Guitar (1 unit)

243. Lower-Division Wind Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Flute (1 unit)
- B. Clarinet (1 unit)
- C. Oboe (1 unit)
- D. Bassoon (1 unit)
- E. Saxophone (1 unit)

244. Lower-Division Brass Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Trumpet (1 unit)
- B. Horn (1 unit)
- C. Trombone (1 unit)
- D. Tuba (1 unit)

245. Lower-Division Percussion Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty. (1 unit)

246. Lower-Division Composition

One-half hour per week of private instruction. *Prerequisites:* Music 112 or equivalent, at least one year of applied vocal or instrumental instruction at the collegiate level (Music 240-245, 247), a placement audition, and approval of music faculty. (1 unit)

247. Lower-Division Synthesizer

Individual instruction on synthesizer and directed study in live performance and digital programming. *Prerequisites:* Music 222 or equivalent, placement audition, and approval of music faculty. (1 unit)

Upper Division**440. Upper-Division Voice**

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty. (1 unit)

441. Upper-Division Keyboard Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Piano (1 unit)
- B. Organ (1 unit)
- C. Harpsichord (1 unit)

442. Upper-Division String Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Violin (1 unit)
- B. Viola (1 unit)
- C. Cello (1 unit)
- D. Bass (1 unit)
- E. Guitar (1 unit)

443. Upper-Division Wind Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Flute (1 unit)
- B. Clarinet (1 unit)
- C. Oboe (1 unit)
- D. Bassoon (1 unit)
- E. Saxophone (1 unit)

444. Upper-Division Brass Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty.

- A. Trumpet (1 unit)
- B. Horn (1 unit)
- C. Trombone (1 unit)
- D. Tuba (1 unit)

445. Upper-Division Percussion Instrument

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty. (1 unit)

446. Upper-Division Composition

One-half hour per week of private instruction. *Prerequisites:* placement audition and approval of music faculty. (1 unit)

447. Upper-Division Synthesizer

Individual instruction on synthesizer and directed study in characteristic repertoire, live performance digital programming, and creative layering of sound. *Prerequisites:* Music 416, 418 or 428 and successful completion of Music 222 (minimum grade of "B") or equivalent, placement audition and approval of music faculty. (1 unit)

PERFORMANCE ORGANIZATIONS

Participation in performance organizations may be repeated for credit, but may not be counted toward fulfilling requirements in the music major.

Upper Division**380. Chamber Orchestra**

Performance of representative orchestral literature. (1 unit)

381. Symphonic Band

Performance of representative symphonic band literature. (1 unit)

382. Chamber Music

Performance of small ensemble music as determined by available instrumentation. *Prerequisite:* consent of instructor.

- A. Woodwinds (1 unit)
- B. Percussion (1 unit)
- C. Flute Choir (1 unit)
- D. Brass Quintet (1 unit)
- E. Saxophone (1 unit)
- F. Guitar Ensemble (1 unit)
- G. Clarinet Ensemble (1 unit)

385. Concert Choir

Performance of representative choral literature. (1 unit)

386. Chamber Singers

Prerequisite: consent of instructor. (1 unit)

387. Opera Workshop

Prerequisite: consent of instructor. (1 unit)

388. Women's Chorus

Performance of representative choral literature for women's ensemble. (1 unit)

389. Wind Ensemble

Performance of representative literature for wind ensemble. *Prerequisite:* consent of instructor. (1 unit)

391. Jazz Ensemble

Performance of representative jazz ensemble literature. (1 unit)

395. University Chorale

Performance of major works for large choral ensemble. Will present at least one public performance per quarter. Open to all students without audition. This course will not satisfy the music major ensemble requirement. (1 unit)

396. Reverence Singers

Performance of vocal literature from the Afro-American tradition. (1 unit)

COMMUNITY SERVICE PROJECT

Upper Division**399. Community Service Project**

Credit for performing academically related tasks in such agencies as governmental, social service and educational institutions. May be repeated for a total of six units. No more than six units of credit for Community Service Project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisite:* consent of instructor. (Credit to be arranged: 1 or 2 units)

NATURAL SCIENCES

School of Natural Sciences

Biological Sciences Building, Room 130
880-5300

The university offers courses of an interdisciplinary nature but no degree program under the natural sciences designation.

COURSE OFFERINGS IN NATURAL SCIENCES (NSci)

Lower Division

110. Health and Self Care

Health knowledge pertaining to the integrated person. Emphasis on self-care and knowledge and skills for evaluating and maintaining one's own health. (2 units)

295. Special Projects in Natural Science

Individual investigation, research, study or survey of selected problems. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 or 2 units)

296. Special Projects in Natural Science

Individual investigation, research, study or survey of selected laboratory problems. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 or 2 units)

Upper Division

300. Science and Technology

Relationship between science and technology—past, present and future—with case studies of the energy crisis, the technology of pollution control and recycling, automation, computers, technology assessment and other contemporary issues. *Prerequisite: junior or senior standing.* (4 units)

310. The Environment and Human Survival

Consideration of the environment and environmental problems generated by the interactive effects of our biological heritage, the impact of science and technology, and our cultural attitudes. *Prerequisite: junior or senior standing.* (4 units)

312. Scientific Contributions to the Development of Civilization

Scientific discoveries that have shaped human history, interrelationship between science and the humanities, impact of science and technology on civilization. Course also uses materials developed by J. Bronowski as "Ascent of Man." *Prerequisite: junior or senior standing.* (4 units)

314. Life in the Cosmos

Life in the cosmos is discussed using the findings of astronomy, biology, chemistry and physics. Topics include the development

of life and its environment, the search for life, interstellar communications and travel and the effects of contact. *Prerequisite: junior or senior standing.* (4 units)

320. Energy

Present and future energy sources, including fossil fuels, hydroelectric power, nuclear energy and solar energy. Scientific principles and technological requirements for developing energy sources, economic factors and environmental problems associated with energy production and consumption. *Prerequisite: junior or senior standing.* (4 units)

325. Perspectives on Gender

This interdisciplinary course uses scientific, humanistic and social science perspectives to foster an understanding of how gender roles in Western culture are established, maintained and changed. (Also offered as Humanities 325 and Social Sciences 325. Students may receive credit for only one of these courses.) *Prerequisite: junior or senior standing.* (4 units)

351. Health and Human Ecology

A survey of the impact of physical, social and biological environments on health related issues such as poor housing, drug abuse, juvenile delinquency, radiation and pesticide exposure, food quality, noise, air and water resources and their relation to human settlements. *Prerequisite: junior or senior standing.* (4 units)

360. Legacy of Life

History of life on earth and the processes that govern its genesis, evolution, extinction, ecology, and preservation. *Prerequisite: junior or senior standing.* (4 units)

395. Directed Study

Reading and library research in one of the natural sciences disciplines conducted under the direction of a faculty member. *Prerequisites: consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

486. Science, Technology and Warfare

Historical examination of the effect of science and technology on warfare. (4 units)

495. Expository Writing for the Natural Sciences

Writing on topics related to the natural sciences, including documented research reports, summaries and analytical papers. Revision and rewriting will be required. Course fulfills the graduation requirement in writing proficiency. No more than one of the expository writing courses (Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, Social Sciences 495) may be taken for credit. Students who have received a grade of no credit in any combination of the expository writing courses two or more times must meet with the 495 coordinator or designee to design a developmental writing plan as a condition for enrolling for a third quarter. All students must obtain junior status at the time of registration or their course request will be cancelled. Graded A, B, C/No credit. *Prerequisites: English 101 and a minimum of 90 quarter (60 semester) units of college credit.* (4 units)

499. Methods and Materials in the Teaching of Natural Sciences Subjects

Individualized instruction in the methods and materials for the teaching of such natural sciences subjects as chemistry, life science, physical education and physics. This course may not be counted toward fulfilling requirements of courses in the above majors. *Prerequisites: Secondary Education 332 (or Education 330 or 332), senior or graduate standing and admission to the single subject credential program or consent of School of Natural Sciences.* (4 units)

595. Independent Study

Research in special topics including library studies, field and/or laboratory work in one of the natural sciences disciplines under the direction of a faculty member. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* A maximum of five units in Natural Sciences 595 may be applied toward graduation. (Credit to be arranged: 1 to 5 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

604. The Nature and History of Science

Brief survey of the development of science from myth through Greek thought to selected topics in contemporary sciences. (4 units)

612. Developing Elementary Science Laboratories

Hands-on laboratory activities which involve the design, implementation and perfection of science demonstrations for the elementary grades. (2 units)

633. Developing Chemistry Laboratories

Hands-on laboratory activities which involve the design, implementation and perfection of science demonstrations for chemistry. (1 unit)

634. Developing Geoscience Laboratories

Hands-on laboratory activities which involve the design and implementation of science demonstrations for the geosciences. Formerly Natural Sciences 630. (1 unit)

635. Developing Life Science Laboratories

Hands-on laboratory activities which involve the design and implementation of science demonstrations for the life sciences. Formerly Natural Sciences 620. (1 unit)

636. Developing Physics Laboratories

Hands-on laboratory activities which involve the design and implementation of science demonstrations for physics. Formerly Natural Sciences 622. (1 unit)

645. Issues in Science, Technology and Society

Seminar in scientific topics of current social interest. (2 units)

694. Master's Project

Prerequisites: advancement to candidacy and consent of the graduate coordinator. (4 units)

695. Directed Graduate Studies

Graduate-level independent study for students in Interdisciplinary Master of Arts programs; to be conducted under direct supervision of a faculty member from the student's committee and, if an interdisciplinary studies major, with approval of the committee on graduate education and consent of dean of graduate studies. (Credit to be arranged: 1 to 6 units)

NURSING

Accredited by the National League for Nursing

Department of Nursing

Temporary Offices, Room 74
880-5380

Bachelor of Science

Nursing

FACULTY: Elizabeth Barfield (Chair), Janet Corley, Kathryn Deitch, Gayle Hirsch, Mary Kornguth, Janice Layton, Mary Anne Schultz, Marilyn Stoner, Kathleen Winston

The Department of Nursing offers a program leading to the Bachelor of Science degree with a major in nursing. The program is approved by the Board of Registered Nursing of California, accredited by the National League for Nursing, and meets requirements for public health nursing certification in California.

Courses are provided that include theory and clinical experience in caring for clients across the life span who are from diverse psychosocial and cultural backgrounds. A wide range of health care agencies is used for clinical experience. The intent of the program is to graduate generalists in nursing who are concerned with promoting optimum health in a variety of settings.

Students are advised to take required lower-division support courses during freshman and sophomore years.

Because there are more persons seeking admission to the nursing major than can be accommodated, students are screened prior to the first nursing course, Nursing 200. The major factor considered in screening is grades in the courses prerequisite to Nursing 200. Contact the Department of Nursing for more information.

Registered Nurse Applicants

Nurses possessing an associate degree or diploma in nursing and holding current California licensure as a registered nurse may apply for admission as transfer students at the junior level. Diploma graduates may enter the university as "natural sciences undeclared (nursing) majors" while completing lower-division requirements. Diploma graduates are required to pass each test in a battery of tests at the 50th percentile to receive college credit for lower-division nursing courses. Tests may be repeated once. Additional information about the tests is available from the Department of Nursing.

Registered nurses begin the nursing course sequence with Nursing 320. Registered nurses may petition to receive credit by examination for Nursing 320, 321, 322, and 323. Students must pass each test before taking the next test in the sequence. Tests may not be repeated. Enrollment of RNs in nursing courses is on a space-available basis.

Licensed Vocational Nurse Applicants

Vocational nurses licensed in California may enroll in selected courses to meet requirements for licensure as a registered nurse in California. The courses required of licensed vocational nurses are: Biology 220, 224, Nursing

320, 321, 322, 323, 400, 401, 402, and 403. These courses total 42 quarter units. Taking these courses enables Licensed Vocational Nurses to meet eligibility requirements to write the examination to become a Registered Nurse in the State of California, but does not result in a degree.

Licensed Vocational Nurses may also choose to enroll in the baccalaureate program to receive a B.S. degree with a major in nursing. For the degree option, Licensed Vocational Nurses begin the nursing sequence with Nursing 204. Enrollment of LVNs in nursing courses is on a space-available basis.

B.S. IN NURSING

Requirements (198 units)

Department Regulations

1. Students must attain grades of "C" or better in all courses required for the major in order to progress in the program. Nursing courses in which students earn less than a "C" may be repeated for credit only once, and this repetition requires both departmental consent and the appropriate university petition.
2. Students on academic probation must remove grade-point deficiencies before progressing further in the nursing program.
3. Nursing students must carry malpractice insurance in the amount of not less than \$1,000,000 per occurrence and \$3,000,000 per year or more in order to be admitted to clinical courses.
4. Prior to the first clinical course and yearly thereafter, students must submit a medical report of a recent physical examination, including tuberculosis skin testing, indicating that they are able to engage in activities required to meet the expectations of the program. Exams are available through the Student Health Center for a fee. Immunizations are required. Contact the Department of Nursing for more information.
5. Students must have access to insured transportation for their clinical experience.
6. Clothing required by the clinical facility appropriate for that setting must be provided by the students with appropriate identification by name and school. (Name pin and arm patch are available for purchase at the Coyote Bookstore.)
7. Advisement with a faculty member is required prior to registration each quarter.

Degree Requirements

Support Courses

- | | |
|---|---|
| One lower-division general education biology course (5) | |
| Biol 220. | Principles of Microbiology (5) |
| Biol 223. | Human Physiology and Anatomy I (5) |
| Biol 224. | Human Physiology and Anatomy II (5) |
| Chem 205. | Fundamentals of Chemistry I: General Chemistry (5) |
| Chem 206. | Fundamentals of Chemistry II: Organic Chemistry (5) |
| Chem 207. | Fundamentals of Chemistry III: Biochemistry (5) |

- Math 305. Statistics: Hypothesis Testing and Estimation (4)
 Psyc 100. Introduction to Psychology (4)
 Psyc 201. Developmental Psychology (4)
 One integrative capstone course that meets the multicultural/gender requirement in the general education program (4)

Sophomore Nursing Courses

- Nurs 200. Intermediate Care I: Beginning Nursing Process, Role and Skills (4)
 Nurs 201. Intermediate Care I: Laboratory (3)
 Nurs 202. Intermediate Care II: Childbearing Families and Children (4)
 Nurs 203. Intermediate Care II: Laboratory (3)
 Nurs 204. Intermediate Care III: Middlescent and Older Adults (4)
 Nurs 205. Intermediate Care III: Laboratory (3)

Junior Nursing Courses

- Nurs 320. Tertiary Care I: Advanced Nursing Process, Role and Skills (4)
 Nurs 321. Tertiary Care I: Laboratory (4)
 Nurs 322. Tertiary Care II: Continuation of Advanced Nursing Process, Role and Skills (4)
 Nurs 323. Tertiary Care II: Laboratory (4)
 Nurs 324. Ambulatory Care I: Young Individuals and Families (4)
 Nurs 325. Ambulatory Care I: Laboratory (4)
 Nurs 350. Issues and Trends in Nursing and Health Care (4)

Senior Nursing Courses

- Nurs 400. Ambulatory Care II: Middlescent and Older Individuals and Families (4)
 Nurs 401. Ambulatory Care II: Laboratory (4)
 Nurs 402. Leadership in Nursing I: Care of Groups of Clients (4)
 Nurs 403. Leadership in Nursing I: Laboratory (4)
 Nurs 404. Leadership in Nursing II: Nursing Management (4)
 Nurs 405. Leadership in Nursing II: Laboratory (2)
 Nurs 422. Nursing Research (4)
 Nurs 450. Theories of Nursing (4)

Students must also meet the university's general education requirements. Twenty-two units of the major are part of the general education requirements.

DEPARTMENTAL HONORS

A graduating senior will be awarded departmental honors in nursing after meeting the following requirements:

1. Achieve a minimum GPA of 3.5 in all upper-division courses taken at the university,
2. Recommendation by the faculty of the Department of Nursing.

COURSE OFFERINGS IN NURSING (Nurs)

Lower Division

200. Intermediate Care I: Beginning Nursing Process, Role and Skills (F)

Introduction to nursing process and nursing role, including basic cognitive, psychomotor, interpersonal, and assessment skills. *Prerequisites:* sophomore standing, admission to nursing major, and consent of department; Biology 220, 223 and 224; completion of G.E. requirements in mathematics or passing score on the Entry Level Mathematics examination; English 101; Communication 120. *Corequisite:* Nursing 201. (4 units)

201. Intermediate Care I: Laboratory (F)

Application of knowledge and skills from Nursing 200. Care of clients in various settings who need a moderate level of nursing care. *Prerequisites:* admission to nursing major and consent of department. *Corequisite:* Nursing 200. (3 units)

202. Intermediate Care II: Childbearing Families and Children (W)

Theory and application of nursing process and nursing role with childbearing families and children of diverse psychosocial and cultural backgrounds. *Prerequisites:* Nursing 200, Psychology 201, and consent of department. *Corequisite:* Nursing 203. (4 units)

203. Intermediate Care II: Laboratory (W)

Clinical experience in settings emphasizing care of childbearing families and children needing a moderate level of care. *Prerequisite:* consent of department. *Corequisite:* Nursing 202. (3 units)

204. Intermediate Care III: Middlescent and Older Adults (S)

Theory and application of nursing process and nursing role with middlescent and older individuals and families of diverse psychosocial and cultural backgrounds. *Prerequisites:* Nursing 202 and consent of department. *Corequisite:* Nursing 205. (4 units)

205. Intermediate Care III: Laboratory (S)

Clinical experience in settings emphasizing physical and emotional care of middlescent and older adults needing a moderate level of care. *Prerequisite:* consent of department. *Corequisite:* Nursing 204. (3 units)

Upper Division

320. Tertiary Care I: Advanced Nursing Process, Role and Skills (F)

Principles of assessment and care of acutely ill individuals of various ages and psychosocial and cultural backgrounds. Pathophysiology as basis of nursing assessment and care. *Prerequisites:* Chemistry 205, 206, 207, Nursing 204 and consent of department. *Corequisite:* Nursing 321. (4 units)

- 321. Tertiary Care I: Laboratory (F)**
Application of knowledge and skills from Nursing 320. Care of clients in subacute and intensive care settings. *Prerequisite:* consent of department. *Corequisite:* Nursing 320. (4 units)
- 322. Tertiary Care II: Continuation of Advanced Nursing Process, Role and Skills (W)**
Continuation of principles of assessment and care of acutely ill individuals of various ages and psychosocial and cultural backgrounds. Pathophysiology as basis of nursing assessment and care. *Prerequisites:* Nursing 320 and consent of department. *Corequisite:* Nursing 323. (4 units)
- 323. Tertiary Care II: Laboratory (W)**
Application of knowledge and skills from Nursing 322. Care of clients in subacute and intensive care settings. *Prerequisite:* consent of department. *Corequisite:* Nursing 322. (4 units)
- 324. Ambulatory Care I: Young Individuals and Families (S)**
Principles of health promotion and chronic illness care with young individuals and families of diverse psychosocial and cultural backgrounds. *Prerequisites:* Nursing 322 and consent of department. *Corequisite:* Nursing 325. (4 units)
- 325. Ambulatory Care I: Laboratory (S)**
Application of knowledge and skills from Nursing 324. Clinical experience in community health agencies with young individuals and families. *Prerequisite:* consent of department. *Corequisite:* Nursing 324. (4 units)
- 350. Issues and Trends in Nursing and Health Care (F)**
Evolution of professional nursing. Trends in health care and nursing. Impact of ethical, legal, political, and economic forces upon health care and nursing. *Prerequisites:* Nursing 203 and consent of department. (4 units)
- 375. Cooperative Education**
Application of nursing concepts and skills through supervised work in a hospital or other health care agency. Sixteen hours of supervised work and a two-hour group meeting are required each week. Open only to non-licensed nursing majors. May be repeated for credit each quarter. Four units may be applied toward the degree. Graded credit/no credit. *Prerequisites:* Nursing 200, 201 and departmental approval of a standard application filed in advance of the quarter in which the course is to be taken. (2 units)
- 396. Selected Topics in Nursing**
Selected nursing topics with specific focus. May be repeated for credit as topics change. *Prerequisite:* consent of department chair prior to registration. (2 units)
- 399. Community Service Project (FWS)**
Credit for performing academically related tasks in such agencies as governmental, social service and educational institutions. May be repeated for a total of four units. No more than four units of credit for Community Service Project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisites:* submission of a project proposal and consent of department chair prior to registration. (Credit to be arranged: 1 or 2 units)

- 400. Ambulatory Care II: Middlescent and Older Individuals and Families (F)**
Principles of health promotion and chronic illness care with mentally and physically ill middlescent and older adults with diverse psychosocial and cultural backgrounds. *Prerequisites:* Nursing 324 and consent of department. *Corequisite:* Nursing 401. (4 units)
- 401. Ambulatory Care II: Laboratory (F)**
Application of knowledge and skills from Nursing 400. Clinical experience in various ambulatory care settings with mentally and physically ill middlescent and older adults. *Prerequisite:* consent of department. *Corequisite:* Nursing 400. (4 units)
- 402. Leadership in Nursing I: Care of Groups of Clients (W)**
Leadership principles related to nursing care of a group of clients. *Prerequisites:* Nursing 400 and consent of department. *Corequisite:* Nursing 403. (4 units)
- 403. Leadership in Nursing I: Laboratory (W)**
Nursing care of a group of clients in various settings. *Prerequisite:* consent of department. *Corequisite:* Nursing 402. (4 units)
- 404. Leadership in Nursing II: Nursing Management (S)**
Principles related to the management of nursing care of a group of clients through other nursing personnel. *Prerequisites:* Nursing 402 and consent of department. *Corequisite:* Nursing 405. (4 units)
- 405. Leadership in Nursing II: Laboratory (S)**
Clinical experience in middle management in nursing in various settings. *Prerequisite:* consent of department. *Corequisite:* Nursing 404. (2 units)
- 422. Nursing Research**
Introduction to the research process and analysis of studies relevant to nursing. *Prerequisites:* Nursing 350, Mathematics 305 (or 350), and consent of department. (4 units)
- 450. Theories of Nursing**
Introduction to various conceptual models of nursing. Implications of these models for nursing. *Prerequisites:* Nursing 350 and consent of department. (4 units)
- 454. Anatomical/Physiological Processes of Aging**
Anatomical and physiological changes occurring in the aging person. *Prerequisites:* Biology 222 or 223 and 224 and upper-division standing. (4 units)
- 455. Chronic Diseases of the Aging Population**
Clinical problems of the aging person including diagnostic and therapeutic aspects. *Prerequisites:* Nursing 454 and upper-division standing. (4 units)
- 456. Adaptation to Chronic Illness**
Nurses role in development and enhancement of health-seeking behaviors in response to physiological and psychosocial stressors associated with chronic illness. *Prerequisite:* upper-division standing. (4 units)

457. Health Services for the Non-Institutionalized Aging Person

Role of the nurse as case manager mobilizing and coordinating sick care, health maintenance and rehabilitation of the aged person in the home. *Prerequisite: Nursing 454.* (2 units)

500. Advanced Topics in Nursing

Selected advanced nursing topics with specific focus within relatively narrow content areas. May be repeated for credit as topics change. *Prerequisite: upper-division standing or consent of instructor.* (4 units)

595. Independent Study

Research conducted under the direction of a faculty member. A total of six units in Nursing 595 may be applied toward graduation. *Prerequisites: Nursing 422, senior standing, a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

PARALEGAL STUDIES

Department of Criminal Justice

Faculty Office Building, Room 144
880-5548

Bachelor of Arts

Criminal Justice - Paralegal Studies Option
(Degree requirements can be found on Page 129.)

Minor

Paralegal Studies

Certificate Program

Paralegal Studies

FACULTY: Paul Guymon (Coordinator)

The Paralegal Studies Certificate Program is designed to prepare and qualify students for employment as paralegals in the private and public sectors. As such it provides opportunities for a variety of individuals to become acquainted with the field of law. A paralegal is essentially a legal assistant who works under the supervision of a lawyer and functions as a vital member of a law office team. Such paraprofessional positions have been created by many public and private agencies, and government law offices to help meet the increasing demands for their services.

Paralegal work involves doing legal research, interviewing clients, representing clients before some administrative agencies, assisting in the drafting and interpreting of legal documents and participating in various other paraprofessional activities. Those with an interest in legal studies will find the program rewarding as an introduction to the area of legal study or as an in-depth study of some one aspect of law.

MINOR IN PARALEGAL STUDIES

Requirements (28 units)

Requirements for a minor in Paralegal Studies

1. PlSt 100. Introduction to Law (4)
2. PlSt 385. Legal Research (4)
3. PlSt 386. Legal Writing (4)
4. Sixteen units chosen from:
 - PlSt 370. Wills, Estates and Trusts (4)
 - PlSt 371. Contract Law (4)
 - PlSt 372. Tort Law (4)
 - PlSt 373. Property Law (4)
 - PlSt 376. Family Law and Community Property (4)
 - PlSt 377. Legal Methods and Procedures (4)
 - PlSt 378. Corporate Law (4)
 - PlSt 380. Criminal Law (4)

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocation/career competencies; or (b) produce mastery of the content of a subfield of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information. Information concerning the paralegal studies certificate can be obtained from the Coordinator of Paralegal Studies.

Certificate in Paralegal Studies

Certificate Requirements (92 units)

General Education (28 units)

1. Eng 101. Freshman Composition (4)
 2. Four units chosen from:
 - Math 110. College Algebra (4)
 - Math 115. The Ideas of Mathematics (4)
 - Math 120. Pre-Calculus Mathematics (4)
 - Math 211. Basic Concepts of Calculus (4)
 3. Four units chosen from:
 - Comm 180. Critical Thinking Through Argumentation (4)
 - Math 180. Critical Thinking Through Problem Solving (4)
 - Phil 205. Critical Thinking Through Symbolic Logic (4)
 - Psyc 105. Critical Thinking Through Problems Analysis (4)
 - Soc 180. Critical Thinking about Social Problems (4)
 4. PSci 203. American Government (4)
 5. SSci 495. Expository Writing in the Social Sciences (4)
 6. Integrative Capstone in the Social and Behavioral Sciences
 - Four units chosen from:
 - SSci 300. Nonwestern World (4)
 - SSci 304. Contemporary Latin America (4)
 - SSci 315. Cultural Adaptation: The Quest for Survival (4)
 - SSci 316. Race and Racism (4)
 - SSci 321. Urbanization and the Urban Environment (4)
 - SSci 325. Perspectives on Gender (4)
 - SSci 343. Understanding Socialism (4)
 - SSci 345. Religious Expression in America (4)
 - SSci 350. Roots of Modern Racism in America (4)
- Note:** Student may receive credit for only one of the following courses:
- Hum 325. Perspectives on Gender (4)
 - NSci 325. Perspectives on Gender (4)
 - SSci 325. Perspectives on Gender (4)

7. Integrative Capstone in the Humanities

Four units chosen from:

- Hum 319. Myth, Metaphor and Symbol (4)
- Hum 325. Perspectives on Gender (4)
- Hum 330. Arts and Ideas (4)
- Hum 335. The Origin and Contemporary Role of Latino Culture (4)
- Hum 340. Interpretation and Values (4)
- Hum 344. Ideas in American Culture (4)
- Hum 380. Comparative Studies in the Arts and Literature of Western and Non-Western Cultures (4)
- Hum 385. A Cultural History of Fashion (4)
- Hum 390. Media America (4)

Note: Student may receive credit for only one of the following courses:

- Hum 325. Perspectives on Gender (4)
- NSci 325. Perspectives on Gender (4)
- SSci 325. Perspectives on Gender (4)

Legal Speciality (36 units)

1. Required courses (12 units)

- PISt 100. Introduction to Law (4)
- PISt 385. Legal Research (4)
- PISt 386. Legal Writing (4)

2. Elective courses (24 units)

Twenty-four units chosen from:

- PISt 370. Wills, Estates and Trusts (4)
- PISt 371. Contract Law (4)
- PISt 372. Tort Law (4)
- PISt 373. Property Law (4)
- PISt 376. Family Law and Community Property (4)
- PISt 377. Legal Methods and Procedures (4)
- PISt 378. Corporate Law (4)
- PISt 382. Bankruptcy Law (4)
- PISt 383. Worker's Compensation (4)
- PISt 387. Legal Interviewing (4)
- PISt 575. Internship in Paralegal Studies (4)
- PISt 590. Seminar in Paralegal Studies (4)

General Electives (28 units)

Twenty-eight units to be chosen from upper-division courses in any field.

COURSE OFFERINGS IN PARALEGAL STUDIES (PISt)

Lower Division

100. Introduction to Law

A general introduction to the law and the legal system. Focus will be on the role of the attorney and the paralegal within the legal system. (4 units)

Upper Division

370. Wills, Estates and Trusts

Study of law relating to the control and disposition of property inter vivos (between living persons) and after death, wills, intestate succession (descent and distribution), future

interests and trusts, estates in land, principles of estate planning and administration of an estate. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

371. Contract Law

Study of law relating to contract formation, formalities, performance and breach. Effect on a contractual relationship of various types of subsequent conduct by the contracting parties and remedies available for breach. Introduction to the Commercial Code of California. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

372. Tort Law

Legal liability for wrongful interference with the person; tangible property, real and personal; intangible interests; and advantageous relations. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

373. Property Law

Basic principles of law relating to various types of property interests: real and personal, tangible and intangible, public and private; acquisition; bailment; fixtures; deeds; escrow, recording and search of public documents and security instruments in connection with real property. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

376. Family Law and Community Property

Formation and dissolution of the family unit: custody, support, property rights and obligations. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

377. Legal Methods and Procedures

Studies of trials at common law and in equity, including examination, competency and privileges of witnesses, judicial notice, burden of proof and presumptions; tactics of litigation, discovery, fact investigation, jurisdiction, remedies, civil procedure and drafting of pleadings. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

378. Corporate Law

Legal status of the corporate entity, corporate structure and distribution of powers and duties among shareholders, directors and officers. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

380. Criminal Law

Theory and practice of criminal law from a case study approach. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

381. Sex Discrimination and the Law

Legal history and contemporary issues in questions of gender and the law. Emphasis on changing sex roles and the impact of those changes upon the law. (4 units)

382. Bankruptcy Law

An examination of U.S. Bankruptcy Law. Explanation of the role of debtors, creditors, debtors-in-possession, and trustees in the bankruptcy system as well as the scope of the automatic stay. Discussion of the role of the office of the United States Trustee as well as that of the paralegal in bankruptcies. *Prerequisites:* Paralegal Studies 385 and 386 or consent of instructor. (4 units)

383. Worker's Compensation

Examination of the California State Labor Code as it pertains to the California Worker's Compensation system. Explanation of worker's compensation benefits and the role of the paralegal in worker's compensation cases. *Prerequisites: Paralegal Studies 385 and 386 or consent of instructor.* (4 units)

384. Immigration Law

Study of law relating to the rights of individuals seeking immigration, including examination of immigration and naturalization laws relating to the admission, exclusion, deportation and naturalization of aliens. *Prerequisites: Paralegal Studies 385 and 386 or consent of instructor.* (4 units)

385. Legal Research

Methods of legal research techniques used to resolve legal questions. Introduction to law libraries and the various types and uses of legal materials available in the California and federal systems. (4 units)

386. Legal Writing

Introduction to the various forms and functions of legal writing using acquired research skills to apply and communicate, in writing, the law as it applies to a specific legal problem. (4 units)

387. Legal Interviewing

Techniques and styles of legal interviewing including the taking of depositions and interrogatories. Illustrations will include selected current issues and topics. *Prerequisites: Paralegal Studies 385 and 386 or consent of instructor.* (4 units)

388. Environmental Law

Survey course examining the implementation, impact and effectiveness of statutes and judicial decisions addressing current environmental problems, and the standing of parties to raise environmental issues. Formerly Paralegal Studies 379. *Prerequisites: Paralegal Studies 385 and 386 or consent of instructor.* (4 units)

575. Internship in Paralegal Studies

Supervised work and study in public and private legal organizations. Graded credit/no credit. *Prerequisites: completion of Paralegal Studies 385 and 386, 16 additional units of paralegal certificate course work, and consent of paralegal studies coordinator.* (4 units)

590. Seminar in Paralegal Studies

Selected current issues and topics in the paralegal field. May be repeated for credit as topics change. *Prerequisites: Paralegal Studies 385 and 386.* (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 8 units in Paralegal Studies 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, Paralegal Studies 385 and 386, consent of instructor and coordinator, approval of a written proposal of a project submitted in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

PHILOSOPHY

Department of Philosophy

University Hall, Room 339
880-5869

Bachelor of Arts

Philosophy

Minor

Philosophy

FACULTY: Jill Buroker, Susan Finsen (Chair),
Beverly Gallo, Thomas Moody, Tony Roy

Philosophy is excellent preparation for a career in law, business, government, journalism and a wide variety of professional areas; and it is excellent preparation for different sorts of graduate and professional study. Philosophy focuses on clear thinking and critical evaluation of unusual and unorthodox ideas. Thus it is excellent training for anyone whose job requires broad perspectives and new and creative ideas. Philosophy does not provide training in specific job tasks; rather, it focuses on basic skills that will prepare you for the more challenging jobs to which you will advance as your career advances.

Philosophy is humanity's oldest intellectual discipline; its range of application is broad. Through philosophy one may think about and develop perspectives on topics as diverse as god, science, language, logic, truth, ethics, politics and law. Typically philosophy leaves aside the doing of the religion, science etc. and asks fundamental questions about the nature of and justification for the various perspectives.

B.A. IN PHILOSOPHY

Requirements (52 units)

Requirements for the B.A. in Philosophy:

Upper-division requirements (52 units)

1. History of Philosophy (12 units)
 - Phil 317. Ancient Philosophy (4)
 - Phil 318. History of Early Modern Philosophy (4)
 - Phil 319. History of Late Modern Philosophy (4)
 - Note:** The history sequence is offered only every other year.
2. Symbolic Logic
 - Phil 300. Predicate Logic (4)
3. Knowledge/Science
 - Four units chosen from:*
 - Phil 385. Theory of Knowledge (4)
 - Phil 386. Philosophy of Science (4)
4. Metaphysics/Language
 - Four units chosen from:*
 - Phil 380. Metaphysics (4)
 - Phil 484. Philosophy of Language (4)
5. Value Theory
 - Four units chosen from:*
 - Phil 350. Ethics (4)

- Phil 361A. Social and Political Philosophy: Classical Political Theories (4)
- Phil 361B. Social and Political Philosophy: Themes in Social and Political Philosophy (4)

6. Intensive Study

Four units chosen from:

- Phil 410. Philosophical Figures and Movements (4)
- Phil 490. Philosophical Topics (4)

7. Twenty units of electives, of which eight units may be lower-division, chosen from philosophy courses. Philosophy courses used to satisfy the critical thinking and philosophy general education requirements will not count toward the major.

Critical Thinking: Majors need not satisfy the GE Critical Thinking Requirement with Philosophy 205; but students who fulfill the requirement with 205 thereby satisfy the prerequisite for Philosophy 300.

Course Offerings: The Department of Philosophy offers courses required for the major on at least a two-year cycle; consult department office for the current schedule.

Electives: A major in philosophy is an exceptionally flexible tool. In any case, students should consult with an advisor in planning their course of study. The following are some generic suggestions:

Graduate Study in Philosophy: Students planning to apply for graduate programs in philosophy should complete eight units of additional upper-division elective philosophy course work and should include among their electives three or four courses from categories 3 through 6 above not taken to satisfy those requirements. Students should also complete a minimum of sixteen units, or equivalent proficiency, in one foreign language (preferably French, German, Latin, or Greek), with attainment of demonstrable reading skill.

Legal Careers: Majors planning to apply for law school or to enter related fields are encouraged to include among their electives at least three courses from among Philosophy 350, 361A, 361B, 466A, 466B, 466C, and 467.

Medical/Helping Professions: Students who will pursue careers in medical and helping professions are encouraged to include among their electives at least three courses from among Philosophy 191, 350, 355 and 368.

Business or Economics: Students who will pursue careers in business or economics are encouraged to include among their electives at least three courses from among Philosophy 191, 350, 359, 361A, 361B, 366 and 369.

Cognitive Science/Artificial Intelligence: Majors who will pursue careers in these and related fields are encouraged to include among their electives at least three courses from among Philosophy 302, 400, 480A, 480B and 484.

Religion and Theology: Majors who will enter a seminary or pursue related activities could include among their electives Philosophy 192, 372 and one or more of 373, 375 and 475.

These may also suggest ways that a minor in Philosophy could be tailored to specific interests.

MINOR IN PHILOSOPHY

Requirements (32 units)

Requirements for a minor in Philosophy:

Upper-division requirements (32 units)

1. History of Philosophy (8 units)
 Phil 317. Ancient Philosophy (4)
Four units chosen from:
 Phil 318. History of Early Modern Philosophy (4)
 Phil 319. History of Late Modern Philosophy (4)
2. Knowledge and the World
Eight units chosen from:
 Phil 380. Metaphysics (4)
 Phil 385. Theory of Knowledge (4)
 Phil 386. Philosophy of Science (4)
 Phil 484. Philosophy of Language (4)
3. Value Theory
Four units chosen from:
 Phil 350. Ethics (4)
 Phil 361A. Social and Political Philosophy: Classical Political Theories (4)
 Phil 361B. Social and Political Philosophy: Themes in Social and Political Philosophy (4)
4. Twelve units of philosophy electives, eight units of which may be lower-division; Philosophy 205 must be included among these courses unless it is taken to satisfy the critical thinking general education requirement. Philosophy courses used to satisfy the critical thinking and philosophy general education requirements will not count toward the minor.

DEPARTMENTAL HONORS

The departmental honors program is individually designed to suit the interests of each student, who may choose one of two options:

1. Taking an examination on a book list which the student prepares under the supervision of a faculty member; or,
2. Writing an honors thesis.

Successful completion of the examination or the thesis results in the awarding of departmental honors.

To qualify for the honors program a student must have an overall grade point average of 3.0 ("B"), and a grade point average of 3.5 in philosophy courses. The student must also have taken at least five philosophy courses at California State University, San Bernardino, one of which may be lower-division, not counting courses satisfying the general education requirements. Application for the honors program must be made in writing to the department three quarters before graduation.

COURSE OFFERINGS IN PHILOSOPHY (Phil)

Lower Division

105. Critical Thinking Through Argument Analysis

Analysis of various kinds of reasoning employed in everyday life and in more specialized contexts, to develop each student's skill in understanding and using carefully constructed arguments. Illustrations will include materials drawn from contemporary issues. (4 units)

190. Introduction to Philosophical Issues

An introduction to philosophical thinking by means of reading, discussing and writing about selected philosophical works. Students are encouraged to develop their own philosophical views in a critical exchange with the views of the philosophers studied. *Prerequisite: English 101 or equivalent.* (CAN PHIL 2) (4 units)

191. Introduction to Values, Technology and Society

An introduction to the philosophical issues surrounding technology and its impact on human life. The course will focus on the moral implications of developments in such areas as medical technology, nuclear warfare and automation, as well as on our changing conceptions of human nature and progress. Formerly Philosophy 250. *Prerequisite: English 101 or equivalent.* (4 units)

192. Introduction to Philosophy of Religion

Introductory treatment of philosophical issues raised by religion and religious belief; discussion of issues such as relations between faith, belief and knowledge, arguments for the existence of god, the problem of evil, and immortality. Formerly Philosophy 270. *Prerequisite: English 101 or equivalent.* (4 units)

193. Introduction to Eastern Philosophy

Introduction to the ways in which Buddhism, Hinduism, Taoism and Confucianism view human life and reality. Formerly Philosophy 275. *Prerequisite: English 101 or equivalent.* (4 units)

194. Introduction to Knowledge and Reality

Inquiry into philosophical presuppositions underlying common sense and scientific views of knowledge and reality. Possible topics include: Was the universe created? Is the world as it appears to us? Are humans merely complex machines or do they have souls? How do we know what we know? Formerly Philosophy 280. *Prerequisite: English 101 or equivalent.* (4 units)

205. Critical Thinking Through Symbolic Logic

Introduction to logic and its application to everyday reasoning. Emphasis on formal methods and modern symbolic logic. (4 units)

Upper Division

300. Predicate Logic

Introduction to the standard predicate calculus. Some meta-theory. This course requires some basic mathematical or logical background. Formerly Philosophy 314. *Prerequisite: Philosophy 205 or consent of instructor.* (4 units)

302. Philosophy of Logic and Mathematics

Philosophical issues raised by logic and mathematics. Discussion of issues such as the nature of logical and mathematical truth, the relation between logic, mathematics and the world, and justifications for logical and mathematical systems. *Prerequisites: one lower-division course in philosophy and Mathematics 110 or equivalent.* (4 units)

306. Inductive Logic

Principles of reasoning underlying the scientific method. Topics include hypothesis formation and testing, foundations and philosophical interpretation of probability and decision theory. *Prerequisite: one lower-division course in philosophy.* (4 units)

317. Ancient Philosophy

Introduction to the origin of Western philosophy, as represented in the works of the Pre-Socratics, Plato, Aristotle, the Stoics, Epicureans, Skeptics and Mystics. Formerly Philosophy 301 and 311. *Prerequisite: one lower-division course in philosophy.* (4 units)

318. History of Early Modern Philosophy

Major philosophical developments in Western philosophy from Descartes through Berkeley, focusing on the nature of knowledge and reality. *Prerequisite: one lower-division course in philosophy.* (4 units)

319. History of Late Modern Philosophy

Major philosophical developments in Western philosophy from Hume to Kant, focusing on the foundations of scientific and philosophical reasoning. Formerly Philosophy 305 and 313. *Prerequisite: one lower-division course in philosophy.* (4 units)

320. Philosophy of Education

Inquiry into the nature of education and its role in human life, and the role of individual and social values. Readings from classical and contemporary philosophers. *Prerequisite: one lower-division course in philosophy.* (4 units)

325. Philosophy and the Arts

Exploration of theories concerning the nature of the arts and their role in human life. Formerly Philosophy 370. *Prerequisite: one lower-division course in philosophy.* (4 units)

350. Ethics

The nature of the meaningful life and its relation to concepts of right and wrong explored through various moral theories. *Prerequisite: one lower-division course in philosophy.* (4 units)

355. Contemporary Ethical Issues

Consideration of moral problems intensified by the rapid pace of social, economic and technological changes: genetic engineering, euthanasia, "the new sexual ethics," abortion and the right to privacy. *Prerequisite: one lower-division course in philosophy.* (4 units)

359. Philosophy and Economics

Study of issues at the intersection of economics and moral and political philosophy, e.g., classic accounts of the nature of value, the nature of justice, the nature of rationality, the measurability of human well-being. *Prerequisite: one lower-division course in philosophy.* (4 units)

361. Social and Political Philosophy

An examination of major perspectives on how societies should be organized. Study of central issues such as legitimacy of government, and rights versus obligations; or of major concepts such as justice, equality, rights, class, patriarchy and power. Formerly Philosophy 360. May be repeated for credit as topics change. *Prerequisite: one lower-division course in philosophy.*

A. Classical political theories. (4 units)

B. Themes in social and political philosophy. (4 units)

363. Philosophy of Human Nature

A study of theories of human nature and the factors motivating human behavior, with focus on such questions as whether human nature is changeable, the analysis of aggression, and the roles of reason, emotion and instinct. Formerly Philosophy 340. *Prerequisite: one lower-division course in philosophy.* (4 units)

364. Philosophy of Race and Gender

A critical survey of various theories about race and gender. Attention will be paid to the debate over racial and gender differences and the moral and political implications of these theories. (4 units)

366. Environmental Ethics

Examination of philosophical theories of humans' moral obligations to the environment and the implications for current environmental issues such as pollution, global warming, species extinction and our obligations to future generations. *Prerequisite: one lower-division course in philosophy.* (4 units)

367. Philosophy and Sexual Politics

Philosophical issues such as gender and patriarchy; the implications for women of theories of rights, justice, and equality; how race and class affect theories about women and whether morality and reason contain a male bias. Formerly Philosophy 357. *Prerequisite: one lower-division course in philosophy.* (4 units)

368. Ethics in the Helping Professions

Consideration of ethical problems encountered in the helping professions; such as privacy, paternalism, respect, consent, manipulation, fairness, truthfulness, etc. *Prerequisite: one lower-division course in philosophy.* (4 units)

369. Business Ethics

A study of moral issues raised by business practices in a free enterprise system, with emphasis on developing ethical reasoning and decision-making skills. Provides perspectives on ethical decision making in areas such as: international relations, employee and community relations, environmental policy and advertising. *Prerequisite: one lower-division course in philosophy.* (4 units)

372. Philosophy of Religion

Problems concerned with the existence and attributes of God or gods, the significance of religious experience and its varieties, and the rationality of faith. Formerly Philosophy 450. *Prerequisite: one lower-division course in philosophy.* (4 units)

373. World Religions

Study of the doctrines and practices of the world's major religions and the philosophic issues raised by their diversity. *Prerequisite: one lower-division course in philosophy.* (4 units)

375. Classics of Eastern Thought

Study of selected Eastern masterpieces such as the Bhagavad Gita, The Tao of Lao Tzu and the Dhammapada. Formerly Philosophy 452. *Prerequisite: one lower-division course in philosophy.* (4 units)

380. Metaphysics

Problems relating to existence. Includes issues such as realism and anti-realism, the nature of modal truth, free-will and determinism, the mind-body problem, and the nature of identity. *Prerequisite: one lower-division course in philosophy.* (4 units)

385. Theory of Knowledge

Problems concerning acquiring and justifying knowledge, including the roles of sense perception and reason, the distinction between knowledge and belief, the nature of evidence, and the concepts of truth and certainty. *Prerequisite: one lower-division course in philosophy.* (4 units)

386. Philosophy of Science

Foundations of science, including the nature of scientific methodology, explanation, concept formation, and the structure of theories, using case studies from the natural sciences and social sciences. Formerly Philosophy 316. *Prerequisite: one lower-division course in philosophy.* (4 units)

400. Advanced Issues in Logic

Discussion of issues such as axiomatic logic, proofs of soundness and completeness, multi-valued logics, modal logics and/or other alternative logics. This course requires some basic mathematical or logical background. Formerly Philosophy 312. *Prerequisite: Philosophy 205 or consent of instructor.* (4 units)

410. Philosophical Figures and Movements

An intensive study of one or more philosophical figures. May be repeated for credit as topics change. *Prerequisite: one lower-division course in philosophy.* (4 units)

466. Philosophy of Law

A study of philosophical problems raised by the law, such as the nature and validity of the law, and concepts of justice; the relation between law and morality; and how rights are or ought to be reflected in the law. Formerly Philosophy 465. May be repeated for credit as topics change.

- A. The Concept of Law (4 units)
- B. Morality and the Law (4 units)
- C. Rights and the Law (4 units)

467. Power, Authority, Force and Violence

The philosophical and historical relations between might and right with focus on the role of power as a means of oppression. Formerly Philosophy 365. *Prerequisite: one lower-division course in philosophy.* (4 units)

475. Mysticism and Philosophy

Study of mystical experience and some problems it raises for philosophical analysis. *Prerequisite: one lower-division course in philosophy.* (4 units)

480. Philosophy of Mind

Various theories about the nature of the mind and the relation of the mind to the body and behavior. Focus will be on different approaches to psychology (behaviorism, functionalism, etc.) or on the consequences of theories of the mind for the question of whether computers can think. May be repeated for credit as topics change. *Prerequisite: one lower-division course in philosophy.*

- A. Philosophical Psychology (4 units)
- B. Minds and Machines (4 units)

484. Philosophy of Language

Inquiry into the syntactic, semantic and pragmatic dimensions of language, focusing on different theories of these components, and the philosophical implications of these theories. Formerly Philosophy 330. *Prerequisite: one lower-division course in philosophy.* (4 units)

490. Philosophical Topics

Study of a specially selected idea, problem or theory in philosophy. May be repeated for credit as topics change. *Prerequisite: one lower-division course in philosophy.* (4 units)

595. Independent Study

Intensive study of topics not offered in other existing philosophy courses. No more than four units of Philosophy 595 can apply towards the philosophy major without departmental approval. *Prerequisites: a minimum grade point average of 3.0, consent of instructor and departmental approval of a project submitted on a standard application filed no later than the end of the first week of classes.* (Credit to be arranged: 2 to 4 units)

PHYSICAL EDUCATION

Department of Physical Education

Physical Education Building, Room 122
880-5349

Bachelor of Science

Physical Education

Teaching Credential Programs

Adapted Physical Education Specialist Credential
Single Subject

Master of Arts

Secondary Education—Physical Education Option
(Degree requirements can be found on Page 360.)

Minor

Physical Education
Recreation

Certificate Programs

Coaching
Fitness Management
Recreation Leadership

FACULTY: Sarah Boeh, Jerry Freischlag, Jennie Gilbert,
Chris Grenfell (Chair), Carolyn Martin, Greg Price,
Reg Price, Terry Rizzo, Cliff Singh

The Department of Physical Education offers a curriculum leading to a bachelor of science with a major in physical education. In addition, a minor in physical education, a minor in recreation, an adapted physical education specialist credential and a single subject credential are offered.

The major in physical education is designed for the student interested in preparing to:

1. Become a physical education teacher;
2. Select a career in nonteaching fields related to physical education, such as commercial physical education, sports business and commercial leisure services;
3. Pursue graduate work in physical education.

Athletic Training Internship Program—Successful completion of course work and 1500 hours of athletic training experience under direct supervision of a NATA Certified Athletic Trainer makes students eligible to attempt the three-part National Athletic Trainers' Association examination leading to NATA certification. Students should take the following courses: Biology 223, 224, Health Science 120, Physical Education 280, 380, 480 and 481.

B.S. IN PHYSICAL EDUCATION

Requirements (79 units)

Requirements for the B.S. in Physical Education:

Lower-division requirements (40 units)

1. Biol 223. Human Physiology and Anatomy I (5)
2. Biol 224. Human Physiology and Anatomy II (5)
3. PE 210A. Topics in the Foundations of Physical Education: Introduction to Physical Education (2)
4. PE 210B. Topics in the Foundations of Physical Education: Introduction to Adapted Physical Education (2)
5. PE 254. Field Work in Physical Education or Recreation I (2)
6. PE 261C. Professional Activity Preparation in Individual and Dual Sports: Dance (2)
7. PE 261F. Professional Activity Preparation in Individual and Dual Sports: Gymnastics (2)
8. PE 261H. Professional Activity Preparation in Individual and Dual Sports: Swimming (2)
9. *Two units chosen from:*
 - PE 261B. Professional Activity Preparation in Individual and Dual Sports: Badminton (2)
 - PE 261G. Professional Activity Preparation in Individual and Dual Sports: Racquetball (2)
 - PE 261J. Professional Activity Preparation in Individual and Dual Sports: Tennis (2)
10. *Four units chosen from:*
 - PE 261A. Professional Activity Preparation in Individual and Dual Sports: Archery (2)
 - PE 261D. Professional Activity Preparation in Individual and Dual Sports: Fitness and Conditioning (2)
 - PE 261E. Professional Activity Preparation in Individual and Dual Sports: Golf (2)
 - PE 261K. Professional Activity Preparation in Individual and Dual Sports: Track and Field (2)

Note: Physical Education 261B, 261G and 261J may be taken if not used to satisfy requirement in category 9.

11. *Eight units chosen from:*

- PE 263A. Professional Activity Preparation of Team Sports: Basketball (2)
- PE 263B. Professional Activity Preparation of Team Sports: Football (Flag) (2)
- PE 263C. Professional Activity Preparation of Team Sports: Soccer (2)
- PE 263D. Professional Activity Preparation of Team Sports: Softball (2)
- PE 263E. Professional Activity Preparation of Team Sports: Volleyball (2)

12. PE 280. Prevention and Treatment of Athletic Injuries (4)

Upper-division requirements (39 units)

1. PE 310. History and Philosophy of Physical Education and Sports (4)
2. PE 320. Motor Learning (4)
3. PE 323. Sport and Society (4)
4. PE 324. Psychological Aspects of Sport (4)
5. PE 355. Physical Education for Children (4)
6. PE 370. Measurement and Evaluation in Physical Education (4)
7. PE 470. Organization and Administration of Physical Education and Athletics (4)
8. PE 480. Kinesiology (4)
9. PE 481. Exercise Physiology (5)
10. PE 490. Seminar in Physical Education (2)

ADAPTED PHYSICAL EDUCATION SPECIALIST CREDENTIAL

Requirements (16 units)

Credential Requirements (16 units)

Upper-division requirements (16 units)

1. ESpe 530. Psychology and Education of Exceptional Individuals (4)
2. PE 330. Physical Education for the Exceptional Individual (4)
3. *Eight units chosen from:*
 - PE 331A. Topics in Adapted Physical Education: Adapted aquatics (2)
 - PE 331B. Topics in Adapted Physical Education: Physically handicapped (2)
 - PE 331C. Topics in Adapted Physical Education: Learning handicapped (2)
 - PE 331D. Topics in Adapted Physical Education: Communicatively handicapped (2)
 - PE 331E. Topics in Adapted Physical Education: Severely handicapped (2)

SINGLE SUBJECT TEACHING CREDENTIAL

The Bachelor of Science in Physical Education is approved as a single subject teaching credential program. In addition to the requirements of the major, students must complete certain prerequisites to the teacher education program. For information about the professional education component, admission to the teacher education program or specific requirements for the single subject waiver program see Page 146 or contact the School of Education C.A.S.E.-Student Teaching Office.

MINOR IN PHYSICAL EDUCATION

Requirements (33 units)

Requirements for a minor in Physical Education:

Lower-division requirements (20 units)

1. PE 210A. Topics in the Foundations of Physical Education: Introduction to Physical Education (2)
2. PE 254. Field Work in Physical Education or Recreation I (2)
3. *Eight units chosen from:*
 - PE 261A. Professional Activity Preparation in Individual and Dual Sports: Archery (2)
 - PE 261B. Professional Activity Preparation in Individual and Dual Sports: Badminton (2)
 - PE 261C. Professional Activity Preparation in Individual and Dual Sports: Dance (2)
 - PE 261D. Professional Activity Preparation in Individual and Dual Sports: Fitness and Conditioning (2)
 - PE 261E. Professional Activity Preparation in Individual and Dual Sports: Golf (2)
 - PE 261F. Professional Activity Preparation in Individual and Dual Sports: Gymnastics (2)
 - PE 261G. Professional Activity Preparation in Individual and Dual Sports: Racquetball (2)
 - PE 261H. Professional Activity Preparation in Individual and Dual Sports: Swimming (2)
 - PE 261J. Professional Activity Preparation in Individual and Dual Sports: Tennis (2)
 - PE 261K. Professional Activity Preparation in Individual and Dual Sports: Track and Field (2)
4. *Four units chosen from:*
 - PE 263A. Professional Activity Preparation of Team Sports: Basketball (2)
 - PE 263B. Professional Activity Preparation of Team Sports: Football (Flag) (2)
 - PE 263C. Professional Activity Preparation of Team Sports: Soccer (2)
 - PE 263D. Professional Activity Preparation of Team Sports: Softball (2)
 - PE 263E. Professional Activity Preparation of Team Sports: Volleyball (2)
5. PE 280. Prevention and Treatment of Athletic Injuries (4)

Upper-division requirements (13 units)

1. PE 323. Sport and Society (4)
or
PE 324. Psychological Aspects of Sport (4)
2. PE 470. Organization and Administration of Physical Education and Athletics (4)
3. PE 481. Exercise Physiology (5)

MINOR IN RECREATION

Requirements (24 units)

Requirements for a Minor in Recreation:

Lower-division requirements (16 units)

1. PE 200. First Aid (2)
2. PE 203. Introduction to Recreation (4)
3. PE 254. Field Work in Physical Education or Recreation I (2)
4. PE 271. Recreation Leadership (4)
5. PE 277. Recreation Programming (4)

Upper-division requirements (8 units)

1. PE 365. Outdoor Education and Camp Leadership (4)
2. PE 470. Organization and Administration of Physical Education and Athletics (4)

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for further certificate information.

Certificate in Coaching

Certificate requirements (32 units)

Lower-division requirements (12 units)

1. PE 200. First Aid (2)
2. *Four units chosen from:*
 - PE 261A. Professional Activity Preparation in Individual and Dual Sports: Archery (2)
 - PE 261B. Professional Activity Preparation in Individual and Dual Sports: Badminton (2)
 - PE 261C. Professional Activity Preparation in Individual and Dual Sports: Dance (2)
 - PE 261D. Professional Activity Preparation in Individual and Dual Sports: Fitness and Conditioning (2)
 - PE 261E. Professional Activity Preparation in Individual and Dual Sports: Golf (2)
 - PE 261F. Professional Activity Preparation in Individual and Dual Sports: Gymnastics (2)
 - PE 261G. Professional Activity Preparation in Individual and Dual Sports: Racquetball (2)
 - PE 261H. Professional Activity Preparation in Individual and Dual Sports: Swimming (2)

- PE 261J. Professional Activity Preparation in Individual and Dual Sports: Tennis (2)
- PE 261K. Professional Activity Preparation in Individual and Dual Sports: Track and Field (2)

3. *Four units chosen from:*

- PE 263A. Professional Activity Preparation of Team Sports: Basketball (2)
- PE 263B. Professional Activity Preparation of Team Sports: Football (Flag) (2)
- PE 263C. Professional Activity Preparation of Team Sports: Soccer (2)
- PE 263D. Professional Activity Preparation of Team Sports: Softball (2)
- PE 263E. Professional Activity Preparation of Team Sports: Volleyball (2)
- 4. PE 267. Sports Officiating (2)

Upper-division requirements (20 units)

1. PE 323. Sport and Society (4)
2. PE 324. Psychological Aspects of Sport (4)
3. PE 343. Methods and Techniques of Coaching (4)
4. PE 470. Organization and Administration of Physical Education and Athletics (4)
5. PE 480. Kinesiology (4)

Certificate in Fitness Management

Certificate requirements (33 units)

Lower-division requirement (4 units)

1. PE 280. Prevention and Treatment of Athletic Injuries (4)

Upper-division requirements (29 units)

1. PE 454. Field Work in Physical Education or Recreation II (3)
2. PE 470. Organization and Administration of Physical Education and Athletics (4)
3. PE 480. Kinesiology (4)
4. PE 481. Exercise Physiology (5)
5. PE 482. Contemporary Fitness Programs (4)
6. PE 483. Exercise Prescription (5)
7. PE 580. Exercise, Energy and Human Performance (4)

Certificate in Recreation Leadership

Certificate requirements (31 units)

Lower-division requirements (20 units)

1. *Four units chosen from:*

- PE 137A. Aquatic Activities: Lifeguard training (2)
- PE 137C. Aquatic Activities: Basic and emergency water safety (2)
- PE 137D. Aquatic Activities: Boating and canoeing (2)
- PE 137F. Aquatic Activities: Scuba diving (2)
- PE 137G. Aquatic Activities: Skin diving (2)
- PE 137H. Aquatic Activities: Springboard diving (2)
- PE 137J. Aquatic Activities: Swimming (2)
- PE 137K. Aquatic Activities: Water polo (2)

2. *Four units chosen from:*

- PE 146A. Outing Skills Activities: Backpacking (2)

- PE 146B. Outing Skills Activities: Camping (2)
 PE 146C. Outing Skills Activities:
 Mountaineering (2)
 PE 146D. Outing Skills Activities: Orienteering (2)
 PE 146E. Outing Skills Activities: Survival skills (2)
 3. PE 203. Introduction to Recreation (4)
 4. PE 271. Recreation Leadership (4)
 5. PE 277. Recreation Programming (4)

Upper-division requirements (11 units)

1. PE 365. Outdoor Education and Camp
 Leadership (4)
 2. PE 454. Field Work in Physical Education or
 Recreation II (3)
 3. PE 470. Organization and Administration of
 Physical Education and Athletics (4)

DEPARTMENTAL HONORS

A graduating senior will be awarded departmental honors in physical education after meeting the following requirements:

- 3.5 GPA in all physical education course work;
- 3.0 ("B") GPA overall;
- Over one-half of the course work for the physical education major must be taken at California State University, San Bernardino;
- Recommendation by the physical education faculty.

Activity Courses (Physical Education 101-149)

The activity course program offers a wide variety of classes which provides students the opportunity to participate in physical activity on a regular basis; develop, improve and maintain a degree of physical fitness; learn and practice lifetime sports skills; and acquire the knowledge that physical exercise is essential for healthful adult living in current society. Classes are coeducational except where the type of activity deems it inappropriate. Not all courses listed are offered each academic year.

Activity Courses (Intercollegiate Athletics, Physical Education 160 and 190)

These courses are designed for those students participating in intercollegiate sports. If a student does not become a member of the squad, they will need to drop the course.

General education requirement for graduation:

All students are required to complete two units of physical education activity courses chosen from:

- PE 101. Individual and Dual Activities
 PE 114. Physical Fitness and Conditioning
 Activities
 PE 117. Combative Activities
 PE 121. Team Activities
 PE 137. Aquatic Activities
 PE 141. Dance Activities
 PE 146. Outing Skills Activities
 PE 147. A Fitness Odyssey
 PE 148. Leisure Sports
 PE 149. Independent Activity Project

Ten additional units of physical education activity courses (numbered 150 and below) for a total of twelve units

maximum may be applied toward graduation. These units may be from the same course.

COURSE OFFERINGS IN PHYSICAL EDUCATION (PE)

Lower Division

The following activities include instruction at all skill levels unless specified in the class schedule as limited to beginning, intermediate or advanced level instruction.

101. Individual and Dual Activities

Development of basic skills, techniques, rules and strategies through instruction and practice in a variety of individual and dual type sports. Graded credit/no credit.

- A. Archery (2 units)
 B. Badminton (2 units)
 C. Bicycling (Field trips required.) (2 units)
 D. Bowling (Field trips required.) (2 units)
 F. Golf (Field trips required.) (2 units)
 G. Gymnastics (2 units)
 N. Racquetball (2 units)
 P. Skiing-Alpine (Field trips required.) (2 units)
 Q. Skiing-Nordic (Field trips required.) (2 units)
 S. Tennis (2 units)

114. Physical Fitness and Conditioning Activities

Principles, practices and individual evaluation in a variety of fitness and conditioning activities. Graded credit/no credit.

- A. Body conditioning (2 units)
 B. Circuit training (2 units)
 C. Jogging (2 units)
 E. Weight training (2 units)
 F. Yoga (2 units)

117. Combative Activities

Instruction and practice in the basic skills and techniques utilized in selected combative type activities. Graded credit/no credit.

- B. Fencing (2 units)
 C. Judo (2 units)
 D. Karate (2 units)
 E. Wrestling (2 units)

121. Team Activities

Basic skills, techniques, rules and strategies of selected team sports achieved through participation. Graded credit/no credit.

- A. Basketball (2 units)
 C. Flag football (2 units)
 F. Soccer (2 units)
 G. Softball (2 units)
 J. Team handball (2 units)
 K. Volleyball (2 units)

137. Aquatic Activities

- A. Lifeguard training. Graded credit/no credit. (Red Cross certification available.) (2 units)
 C. Basic and emergency water safety. Graded credit/no credit. (Red Cross certification available.) (2 units)
 D. Boating and canoeing. Graded credit/no credit. (Field trips required. Red Cross certification available.) (2 units)

- F. Scuba diving. Graded credit/no credit. *Prerequisite: skin diving or consent of instructor.* (Field trips required. NAUI certification available. Doctor's physical examination required.) (2 units)
- G. Skin diving. Graded credit/no credit. (Field trips required. NAUI certification available.) (2 units)
- H. Springboard diving. Graded credit/no credit. (2 units)
- J. Swimming. Graded credit/no credit. (Red Cross certification available.) (2 units)
- K. Water polo. Graded credit/no credit. (2 units)

141. Dance Activities

Proficiency and practice in basic dance steps and the exploration of movement, expression and creativity utilized in dance. Graded credit/no credit.

- A. Aerobic (2 units)
- B. Ballet (2 units)
- E. Folk (2 units)
- F. Jazz (2 units)
- G. Jazz-exercise (2 units)
- H. Modern (2 units)
- J. Social (2 units)
- K. Square (2 units)

146. Outing Skills Activities

Introduction and practice to basic skills, equipment and safety techniques common to the spectrum of outdoor/wilderness activities. Field trips required. Graded credit/no credit.

- A. Backpacking (2 units)
- B. Camping (2 units)
- C. Mountaineering (2 units)
- D. Orienteering (Also offered as Military Science 146D. Students may not receive credit for both.) (2 units)
- E. Survival Skills (Also offered as Military Science 146E. Students may not receive credit for both.) (2 units)

147. A Fitness Odyssey

A self-paced exercise and/or plan of study for the mature adult. Programs designed to fit individual life style needs on a contract basis following examination of past and present activity patterns. Graded credit/no credit. (2 units)

148. Leisure Sports

Mild to moderately active leisure activities suited to the capabilities and interests of the mature adult. Graded credit/no credit. (2 units)

149. Independent Activity Project

Activity project designed to satisfy individual needs of students who cannot meet requirements of a regular activity class due to a medical, physical or other conflict; under the supervision of a faculty member. Graded credit/no credit. *Prerequisite: consent of department chair.* (2 units)

160. Women's Intercollegiate Activities

Enrollment limited to members of intercollegiate sports teams. The intercollegiate activity units may not be substituted for physical education activity units in the undergraduate degree requirements. Graded credit/no credit.

- A. Volleyball (2 units)
- B. Cross Country (2 units)
- C. Basketball (2 units)
- D. Tennis (2 units)

- E. Softball (2 units)
- F. Swimming (2 units)

190. Men's Intercollegiate Activities

Enrollment limited to members of intercollegiate sports teams. The intercollegiate activity units may not be substituted for physical education activity units in the undergraduate degree requirements. Graded credit/no credit.

- A. Soccer (2 units)
- B. Cross Country (2 units)
- C. Basketball (2 units)
- D. Tennis (2 units)
- E. Golf (2 units)
- F. Baseball (2 units)
- G. Water Polo (2 units)
- H. Swimming (2 units)

200. First Aid

The emergency care and treatment of illnesses and injuries including training in cardiopulmonary resuscitation (CPR). May lead to certification in Standard First Aid from the American Red Cross and/or CPR from the American Heart Association. (2 units)

203. Introduction to Recreation

Orientation to recreation as a profession. Meaning, content, history, philosophy and scope of the field of recreation. (CAN REC 2) (4 units)

205. Foundations for Lifetime Fitness

Analysis of foundation issues related to lifetime fitness. Examination of contemporary issues of physical well being. Typical topics covered are to live and be healthy, holistic nature of exercise and performance, body composition, weight control, exercise and nutrition, relaxation and stress management, and concepts of human movement. (2 units)

210. Topics in the Foundations of Physical Education

Courses designed to survey the fundamental principles, objectives, history and philosophies in the discipline of physical education.

- A. Introduction to Physical Education (2 units)
- B. Introduction to Adapted Physical Education (2 units)

237. Water Safety Instruction

Materials and methods in organizing school, community and camp aquatic programs. Supervised practice in teaching aquatics. Meets standards for Red Cross certification. One hour lecture and three hours laboratory. Formerly Physical Education 362. *Prerequisite: Physical Education 137A or 137C or equivalent.* (2 units)

254. Field Work in Physical Education or Recreation I

A supervised experience in the Department of Physical Education under the direction of a faculty member. One hour lecture and three hours of observation. *Prerequisite: one course from the Physical Education 261 or 262 sequence or one course from the Physical Education 263 or 266 sequence.* (2 units)

261. Professional Activity Preparation in Individual and Dual Sports

The development of techniques and skills of individual/dual activities. *Prerequisite: one of the following: Physical Education 210A, 210B, 210C, 210D or 310.*

- A. Archery (2 units)
- B. Badminton (2 units)
- C. Dance (2 units)
- D. Fitness and Conditioning (2 units)
- E. Golf (2 units)
- F. Gymnastics (2 units)
- G. Racquetball (2 units)
- H. Swimming (2 units)
- J. Tennis (2 units)
- K. Track and Field (2 units)

263. Professional Activity Preparation of Team Sports

The development of techniques and skills of team activity. *Prerequisite: one of the following: Physical Education 210A, 210B, 210C, 210D or 310.*

- A. Basketball (2 units)
- B. Football (Flag) (2 units)
- C. Soccer (2 units)
- D. Softball (2 units)
- E. Volleyball (2 units)

267. Sports Officiating

An introduction to contest rules and mechanics of officiating for selected sports. Personal and philosophical bases for successful officiating are examined. (2 units)

271. Recreation Leadership

Organization, supervision and administration of recreation programs and practical experience in recreation situations which provide the opportunity to develop leadership skills. (CAN REC 4) (4 units)

277. Recreation Programming

Materials and methods used in planning and conducting programs in recreation, such as social recreation, dramatics, art and sports. *Prerequisite: Physical Education 203 or 271.* (4 units)

280. Prevention and Treatment of Athletic Injuries

Theories and methods in the prevention, assessment, treatment and rehabilitation of athletic injuries, including practical experience. Materials fee required. *Prerequisites: Biology 223 and 224.* (4 units)

Upper Division

310. History and Philosophy of Physical Education and Sports

Examination of historical influences on and philosophical interpretation of the evolution of sport and physical education from ancient Greece to present with emphasis on effects in the United States. (4 units)

320. Motor Learning

Scientific analysis of perceptual motor behavior; learning, memory, transfer theories, motor control and motor performance in physical activity. (4 units)

323. Sport and Society

An examination of sociocultural aspects of sport with an emphasis on the American sport structure. Formerly Physical Education 321. (4 units)

324. Psychological Aspects of Sport

The psychological realm of sport and physical activity including the nature, significance and development of sport psychology. Formerly Physical Education 322. (4 units)

330. Physical Education for the Exceptional Individual

Investigation and analysis of disabilities encountered in the environment of physical education. *Prerequisites: Physical Education 210B and 320, or consent of department.* (4 units)

331. Topics in Adapted Physical Education

Materials, techniques of assessment, methods of instruction and activities utilized in physical education for individuals with disabilities. *Prerequisite: Physical Education 330.*

- A. Adapted aquatics (American Red Cross certification) (2 units)
- B. Physically handicapped (2 units)
- C. Learning handicapped (2 units)
- D. Communicatively handicapped (2 units)
- E. Severely handicapped (2 units)

343. Methods and Techniques of Coaching

Strategies, practice organization and planning for coaching of athletic teams. The purpose of school athletics, public relations responsibilities and personal qualities for success are examined. (4 units)

352. Movement for Children

The study and analysis of movement for children. Includes the structure of movement, the integration of movement activities and the human development aspects of movement. (4 units)

355. Physical Education for Children

Development of physical education programs for children ages 5-12 including selection of activities. (4 units)

365. Outdoor Education and Camp Leadership

Knowledge, concepts and techniques for the administration and organization of camps and for working with people in the out-of-doors. Includes a supervised leadership experience and field trips to observe camp facilities, programs and resources. (4 units)

370. Measurement and Evaluation in Physical Education

Selection, application and interpretation of tests utilized in physical education and recreation. *Prerequisites: Physical Education 210A and 210B.* (4 units)

380. Advanced Assessment and Rehabilitation of Athletic Injuries

Study of specific techniques of injury evaluation and assessment. Development and application of rehabilitation programs. Four hours lecture plus eight hours of arranged fieldwork per week. *Prerequisite: Physical Education 280.* (4 units)

454. Field Work in Physical Education or Recreation II

A supervised leadership experience in a physical education, recreational or intramural setting. *Prerequisites: Physical Education 254 and 470.* (3 units)

470. Organization and Administration of Physical Education and Athletics

Organizational and administrative structures, problems, issues and practices relevant to physical education and athletics in various settings. *Prerequisites: one course from the Physical Education 261 sequence and one course from the Physical Education 263 sequence.* (4 units)

480. Kinesiology

Analysis of human movement as based on anatomical neuromuscular and mechanical principles. *Prerequisites: Biology 223 and 224.* (4 units)

481. Exercise Physiology

Effects of physical activity on the physiological systems of the human body. Four hours lecture and three hours laboratory. *Prerequisites: Biology 223 and 224.* (5 units)

482. Contemporary Fitness Programs

Analysis of contemporary methods and technologies used in fitness programs. Critiques made in light of research findings and practical applications. Formerly Physical Education 420. (4 units)

483. Exercise Prescription

Development of skills for assessment and prescription of exercise and training schedules for normal, high level fitness and special populations. Four hours lecture and three hours laboratory. Formerly Physical Education 430. (5 units)

490. Seminar in Physical Education

Selected topics in physical education and recreation. *Prerequisite: senior standing or consent of department.* (2 units)

499. Methods and Materials in the Teaching of Physical Education

Individualized instruction in the methods and materials for the teaching of physical education. *Prerequisites: Education (330 or) 332, senior or graduate standing and admission to the Single Subject Credential Program or consent of the School of Natural Sciences.* (4 units)

580. Exercise, Energy and Human Performance

Energy demands and dietary adjustments required in physical performance with emphasis on high intensity activities. Consideration of climactic factors, ergogenic aids and synthetic substance ingestion. Formerly Physical Education 412. *Prerequisite: Physical Education 481.* (4 units)

595. Independent Study

Experimental effort, field or library research conducted under the direction of a faculty member. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Graduate Seminar

Examination of selected disciplinary and professional issues in physical education through critical analysis of literature and research findings. (2 units)

623. Sport and Social Issues

Social aspects of sport including social values, race, gender, ethnicity and social deviance. Formerly Physical Education 630. (4 units)

624. Sport Psychology

The study of underlying psychological factors in sports. To include educational implications, strategies with young athletes, and dynamics of the sport group. Formerly Physical Education 625. (4 units)

630. Physical Education for Special Populations

Physical activity assessment, and program development for impaired populations. (4 units)

670. Leadership in Physical Education

Theory and analysis of leadership behavior in physical education. Emphasis on developing leadership knowledge, qualities, and skills applicable to diverse physical activity settings. Formerly Physical Education 620. (4 units)

681. Exercise and Sport Science

The fundamental principles of exercise physiology as applied to physical activity, sport, and human performance. Formerly Physical Education 640. (4 units)

PHYSICS

Department of Physics

Physical Sciences Building, Room 119
880-5397

Bachelor of Arts

Physics

Bachelor of Science

Physics

Teaching Credential Program

Physics

Minor

Physics

FACULTY: Leo Connolly (Chair), Paul Dixon, Karen Kolehmainen, Paul Renteln, Javier Torner, Timothy Usher

Traditionally physics graduates either have gone on to graduate work in physics or have found employment in industrial or governmental laboratories. Other opportunities which have recently become interesting for physics graduates include atmospheric physics (including air pollution studies), geophysics, radiation safety, oceanography, astrophysics, technical administration, biophysics, computer science and medical instrumentation development.

The program for a bachelor of arts degree in physics provides basic knowledge in the main subject areas of physics as well as an opportunity for students to elect a considerable number of courses in other disciplines. The bachelor of science program includes additional course work in physics and related fields which further prepares a student for employment or graduate work.

Pre-engineering - Although CSU San Bernardino does not offer an engineering degree, the campus does provide a pre-engineering program that allows the student to complete the first two years of courses generic to engineering. The student may then transfer to an accredited engineering program of their choice. The following courses have been recommended as appropriate transfer courses: Chemistry 215, 216, Mathematics 211, 212, 213, 251, 252, Physics 221, 222, 223, 234, 235 and selected courses in computer science and general education.

B.A. IN PHYSICS

Requirements (87 units)

Requirements for the B.A. in Physics:

Lower-division requirements (53 units)

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
2. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
3. Math 211. Basic Concepts of Calculus (4)

4. Math 212. Calculus II (4)
5. Math 213. Calculus III (4)
6. Math 251. Multivariable Calculus I (4)
7. Math 252. Multivariable Calculus II (4)
8. Phys 221. General Physics I (5)
9. Phys 222. General Physics II (5)
10. Phys 223. General Physics III (5)
11. Phys 224. General Physics IV (3)
12. Phys 228. General Physics V (3)

Upper-division requirements (26 units)

1. Math 331. Linear Algebra (4)
2. Phys 306. Intermediate Classical Mechanics (4)
3. Phys 313. Electrodynamics (4)
3. Phys 322. Quantum Mechanics (4)
4. Phys 324. Statistical and Thermal Physics (4)
5. Phys 373. Mathematical Methods of Physics I (4)
6. Phys 430. Advanced Physics Laboratory (2)

Elective course work (8 units)

1. Eight units of upper-division physics courses selected with the approval of the department and chosen from:
 - Phys 315. Introduction to Modern Optics (4)
 - Phys 370. Introduction to Astrophysics (4)
 - Phys 406. Advanced Mechanics (4)
 - Phys 414. Advanced Electrodynamics (4)
 - Phys 422. Intermediate Quantum Physics (4)
 - Phys 450. Introduction to Solid State Physics (4)
 - Phys 461. Introduction to Nuclear Physics (4)
 - Phys 463. Introduction to Elementary Particle Physics (4)
 - Phys 473. Mathematical Methods of Physics II (4)
 - Phys 480A. Topics in Classical Physics: Mechanics (4)
 - Phys 480B. Topics in Classical Physics: Electrodynamics (4)
 - Phys 485. Seminar: Topics in Contemporary Physics (2)
 - Phys 573. Mathematical Methods of Physics III (4)
 - Phys 595. Independent Study (1 - 6)

B.S. IN PHYSICS

Requirements (109 units)

Requirements for the B.S. in Physics:

Lower-division requirements (53 units)

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding (6)
2. Chem 216. General Chemistry II: Principles of Chemical Reactions (6)
3. Math 211. Basic Concepts of Calculus (4)
4. Math 212. Calculus II (4)
5. Math 213. Calculus III (4)
6. Math 251. Multivariable Calculus I (4)
7. Math 252. Multivariable Calculus II (4)
8. Phys 221. General Physics I (5)
9. Phys 222. General Physics II (5)
10. Phys 223. General Physics III (5)
11. Phys 224. General Physics IV (3)
12. Phys 228. General Physics V (3)

Upper-division requirements (30 units)

1. Math 331. Linear Algebra (4)
2. Phys 306. Intermediate Classical Mechanics (4)
3. Phys 313. Electrodynamics (4)
4. Phys 322. Quantum Mechanics (4)
5. Phys 324. Statistical and Thermal Physics (4)
6. Phys 373. Mathematical Methods of Physics I (4)
7. Phys 414. Advanced Electrodynamics (4)
8. Phys 430. Advanced Physics Laboratory (2)

Elective Course Work (26 units)

1. *Eighteen units of upper-division physics courses selected with the approval of the department and chosen from:*
 - Phys 315. Introduction to Modern Optics (4)
 - Phys 370. Introduction to Astrophysics (4)
 - Phys 406. Advanced Mechanics (4)
 - Phys 422. Intermediate Quantum Physics (4)
 - Phys 424. Statistical Mechanics (4)
 - Phys 450. Introduction to Solid State Physics (4)
 - Phys 461. Introduction to Nuclear Physics (4)
 - Phys 463. Introduction to Elementary Particle Physics (4)
 - Phys 473. Mathematical Methods of Physics II (4)
 - Phys 480A. Topics in Classical Physics: Mechanics (4)
 - Phys 480B. Topics in Classical Physics: Electrodynamics (4)
 - Phys 485. Seminar: Topics in Contemporary Physics (2)
 - Phys 573. Mathematical Methods of Physics III (4)
 - Phys 595. Independent Study (1 to 6)
2. Four units of upper-division electives selected from course work in the School of Natural Sciences with the approval of the Physics Department.
3. Four units of computer science course work at the 200-level or above selected with the approval of the Physics Department.

TEACHING CREDENTIAL PROGRAM

Students wishing to be recommended for a single subject teaching credential in physical science must, either within the major or as electives in addition to the requirements for the Bachelor of Arts or Bachelor of Science degree in Physics, take the following:

1. Chem 215. General Chemistry I: Atomic Structure and Chemical Bonding
2. Chem 216. General Chemistry II: Principles of Chemical Reactions
3. Chem 245. Modern Quantitative Analysis
4. Chem 221. Organic Chemistry I
5. Geol 101. Physical Geology
6. Geol 310. Intermediate Field Studies
or
Geol 440. Geology of California
7. Phys 103. Descriptive Astronomy

In addition, certain prerequisites and professional education courses are required. For information about admission to the teacher education program, education courses re-

quired or the specific requirements of the single subject waiver program see Page 146 or contact the School of Education C.A.S.E.-Credentials Office.

All Single Subject Waiver programs are being reviewed and may be revised due to changes in Statewide requirements. Students who declare the B.A. or B.S. in Physics after January 1995 and who wish to eventually be recommended for acceptance into the teaching credential program must follow the new requirements available in the Physics Department Office.

MINOR IN PHYSICS

Requirements (61 units)**Requirements for a minor in Physics:****Lower-division requirements (41 units)**

1. Math 211. Basic Concepts of Calculus (4)
2. Math 212. Calculus II (4)
3. Math 213. Calculus III (4)
4. Math 251. Multivariable Calculus I (4)
5. Math 252. Multivariable Calculus II (4)
6. Phys 221. General Physics I (5)
7. Phys 222. General Physics II (5)
8. Phys 223. General Physics III (5)
9. Phys 224. General Physics IV (3)
10. Phys 228. General Physics V (3)

Upper-division requirements (20 units)

1. Phys 306. Intermediate Classical Mechanics (4)
2. Phys 313. Electrodynamics (4)
3. Phys 322. Quantum Mechanics (4)
4. Phys 324. Statistical and Thermal Physics (4)
5. Phys 373. Mathematical Methods of Physics I (4)

COURSE OFFERINGS IN PHYSICS (Phys)

Lower Division**100. Physics in the Modern World (FWS)**

Examination of physics and its contemporary use, including topics of: mechanics, electricity, optics, sound, heat and radioactivity. This course is intended for students with little background in science. Four hours lecture and three hours laboratory. *Prerequisite: satisfactory score on the Entry Level Mathematics examination.* (5 units)

103. Descriptive Astronomy (FWS)

A brief history of the development of astronomy followed by modern descriptions of our planetary system, stars, galaxies, models of the universe and the possibilities of life in the universe. Discussions of methods of extending knowledge of the universe. No previous background in natural sciences is required. Four hours lecture and three hours laboratory. Formerly Natural Sciences 100. (5 units)

121. Basic Concepts of Physics I (F)

First course of a three-course sequence surveying the basic concepts of physics, primarily for students entering fields relating to the biological sciences. This course will cover the basic principles of mechanics. Four hours lecture and three hours laboratory. *Prerequisite: Mathematics 192 or 211, with a grade of "C-" or better.* (CAN PHYS SEQ A) (5 units)

122. Basic Concepts of Physics II (W)

Continuation of Physics 121. Topics include electricity, electric circuits and magnetism. Three hours lecture and three hours laboratory. *Prerequisite: Physics 121.* (CAN PHYS SEQ A) (4 units)

123. Basic Concepts of Physics III (S)

Continuation of Physics 122. Topics include optics, waves and modern physics. Three hours lecture and three hours laboratory. *Prerequisite: Physics 122.* (CAN PHYS SEQ A) (4 units)

150. Introductory Electronics

Introduces electronics for the sciences and engineering. Assumes no experience in electronics and can be taken prior to introductory physics. Focus is on analog electronics: practical circuits, passive and active circuit elements, signal conditioning, test and measurement skills, and a brief introduction to digital electronics. Three hours lecture and three hours laboratory. *Prerequisites: knowledge of trigonometry and exponential functions.* (4 units)

221. General Physics I (F)

First course of a five-course sequence in introductory physics for scientists and engineers. This sequence is intended for students with a strong background in mathematics and the sciences. Mechanics. Four hours lecture and three hours laboratory. *Prerequisite: Mathematics 211 (or 200). Prerequisite or corequisite: Mathematics 212.* (CAN PHYS 8) (5 units)

222. General Physics II (W)

Second course in a five-course sequence in introductory physics for scientists and engineers. Electromagnetism. Four hours lecture and three hours laboratory. *Prerequisites: Physics 221 with a grade of "C" or better, Mathematics 212 (or 201). Recommended: Mathematics 213 (or 202).* (CAN PHYS 12) (5 units)

223. General Physics III (S)

Third course of a five-course sequence in introductory physics for scientists and engineers. Waves and optics. Four hours lecture and three hours laboratory. *Prerequisite: Physics 222 with a grade of "C" or better.* (CAN PHYS 14) (5 units)

224. General Physics IV (F)

Fourth course of a five-course sequence in introductory physics for scientists and engineers. Special relativity, kinetic theory and thermodynamics. Three hours lecture. *Prerequisite: Physics 223 with a grade of "C" or better or consent of instructor.* (3 units)

228. General Physics V (W)

Fifth course of a five-course sequence in introductory physics for scientists and engineers. Modern physics. Three hours lecture. *Prerequisite: Physics 224 with a grade of "C" or better or consent of instructor.* (3 units)

234. Vector Statics (W)

Two and three dimensional equilibria of frames, machines, and trusses using vector algebra; friction; principles of moments, moments of inertia for areas and masses, centroids and centers of gravity. *Prerequisite: Physics 221. Prerequisite or corequisite: Mathematics 213.* (4 units)

235. Vector Dynamics (S)

Vector treatment of absolute and relative motion of particles and rigid bodies in translating and rotating reference frames. Newton's law of motion, work-energy, impulse-momentum. *Prerequisite: Physics 234 with a grade of "C" or better. Prerequisite or corequisite: Mathematics 251.* (4 units)

295. Special Projects in Physics (FWS)

Individual investigation, research, study or survey of selected problems. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 or 2 units)

Upper Division**303. Astronomy for Educators (FWS)**

An introductory course in the modern description of our planetary system, stars, galaxies, and models of the universe followed by basic principles and ideas in space science. Three hours lecture. (3 units)

304. Physics in the Classroom (FWS)

Basic concepts of physics as related to the elementary and middle school classroom. Concepts include mechanics, electricity and magnetism, optics, thermodynamics, and modern physics. One hour lecture and three hours laboratory. *Prerequisite: one college level course in chemistry or earth science.* (2 units)

305. Demonstration Laboratory in Physics

A demonstration laboratory exploring the basic principles of physics through individual student demonstration. Three hours laboratory. *Prerequisite or corequisite: Physics 304.* (1 unit)

306. Intermediate Classical Mechanics (F)

A continuing study of dynamics with an introduction to advanced formulations. Four hours lecture. *Prerequisites: Physics 228 and Physics 373 (or 310).* (4 units)

313. Electrodynamics (W)

Derivation and applications of Maxwell's equations. Four hours lecture. *Prerequisites: Physics 228 and 373 (or 310).* (4 units)

315. Introduction to Modern Optics

An introduction to geometrical optics, physical optics and lasers. Four hours lecture. *Prerequisite: Physics 313.* (4 units)

322. Quantum Mechanics

Introduction to quantum mechanics. Topics include the origins of quantum theory, wave functions, the Schrodinger equation, and one dimensional potentials. Four hours lecture. Formerly Physics 321/421. *Prerequisites: Physics 228 and 373 (or 310).* Recommended: Mathematics 331. (4 units)

324. Statistical and Thermal Physics

Basics of equilibrium thermodynamics including statistical description of physical systems, entropy and temperature, classical and quantum statistical ensembles, thermodynamics, and selected applications. Four hours lecture. Formerly Physics 424. *Prerequisites: Physics 228 and Mathematics 252.* (4 units)

370. Introduction to Astrophysics

Basic principles of stellar structure and evolution, galactic structure, extragalactic astronomy and cosmology. Four hours lecture. *Prerequisites: Physics 228 and 373 (or 310).* (4 units)

373. Mathematical Methods of Physics I (F)

Vector calculus, Fourier analysis, and ordinary differential equations. Emphasis on techniques applicable to the problems of physics. (Also offered as Mathematics 373. Students may not receive credit for both.) Formerly Physics 310/Mathematics 310. *Prerequisites: Physics 222 and Mathematics 252 (or 202 or 203).* Mathematics 331 is recommended. (4 units)

406. Advanced Mechanics

A continuation of Physics 306 with emphasis in Lagrangian and Hamiltonian formulation in classical mechanics. Formerly Physics 418A. Four hours lecture. *Prerequisites: Physics 306 and one of the following: Physics 373 (or 310), Mathematics 373 (or 310).* (4 units)

414. Advanced Electrodynamics

A continuation of Physics 313 with advanced applications of Maxwell's equations and electromagnetic waves. Formerly Physics 418B. Four hours lecture. *Prerequisites: Physics 313 and 473 or Mathematics 473.* (4 units)

422. Intermediate Quantum Physics

Continued study of the principles of quantum mechanics introduced in Physics 322. Topics include the axiomatic formulation of quantum mechanics, spin and orbital angular momentum, the Schrodinger equation in three dimensions, approximation methods, and scattering. *Prerequisites: Physics 306, 322 and 414.* (4 units)

430. Advanced Physics Laboratory

Selected advanced experiments appropriate to a student's previous preparation. May be repeated for credit. Six hours laboratory per week. *Prerequisite: Physics 313.* Recommended: Physics 322. (2 units)

450. Introduction to Solid State Physics

Basic concepts of solid state physics, including crystal structure; free electron gas model; electronic structure of solids; phonons; properties of metals, insulators and semiconductors; magnetism; superconductivity. Four hours lecture. Formerly Physics 432. *Prerequisite: Physics 422.* (4 units)

461. Introduction to Nuclear Physics

Basic concepts of nuclear structure and reactions, including accelerators and detectors, the nucleon-nucleon force, basic nuclear properties, the shell model, radioactivity, heavy ion reactions and quarks. Four hours lecture. *Prerequisites: Physics 306, 422 and 373 or Mathematics 373.* (4 units)

463. Introduction to Elementary Particle Physics

A survey of elementary particle physics, including accelerators, relativistic kinematics, conservation laws, quarks, the standard model, and quantum field theories. Four hours lecture. *Prerequisites: Physics 306, 373 or Mathematics 373, and Physics 422.* (4 units)

473. Mathematical Methods of Physics II (W)

A continuation of Mathematics/Physics 373. Topics covered include functions of a complex variable and partial differential equations. (Also offered as Mathematics 473. Students may not receive credit for both.) Formerly Mathematics 425/Physics 425. *Prerequisite: Mathematics 373 (or 310), or Physics 373 (or 310).* Mathematics 331 and Physics 228 are strongly recommended. (4 units)

480. Topics in Classical Physics

Further treatment of topics in physics introduced in previous courses.

A. Mechanics. *Prerequisite: Physics 406.* (4 units)

B. Electrodynamics. *Prerequisite: Physics 414.* (4 units)

485. Seminar: Topics in Contemporary Physics

A lecture course on a current topic or on new developments in physics. May be repeated for credit as topics change. Formerly Physics 440. (2 units)

573. Mathematical Methods of Physics III (S)

A continuation of Mathematics /Physics 473 with emphasis on advanced topics relevant to physics. (Also offered as Mathematics 573. Students may not receive credit for both.) *Prerequisites: Mathematics 331, and Mathematics 425 or Physics 425 or Mathematics 473 or Physics 473.* (4 units)

585. Internship in Physics (FWS)

Supervised work and study in physics in private or public setting. May be repeated for up to six units of credit. *Prerequisites: consent of instructor and department.* (Credit to be arranged: 2 to 4 units)

595. Independent Study (FWS)

Research in physics conducted under the direction of a faculty member. A total of six units in Physics 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

POLITICAL SCIENCE

Department of Political Science

Pfau Library, Room 236
880-5535

Bachelor of Arts

Political Science
Single Subject Waiver Program

Teaching Credential Program

Single Subject

Minor

Political Science
Pre-law

Master of Arts

National Security Studies
(Degree requirements can be found on Page 401.)

Certificate Programs

International Relations
Paralegal Studies
(Paralegal Studies Certificate requirements can be found on Page 254.)

FACULTY: Mark Clark, Edward Erler, Brij Khare,
Michael LeMay (Chair), Alemayehu Mariam, Linda Norman,
Ralph Salmi, Philip Taylor, Scot Zentner

The major in political science is designed for students who desire a liberal arts program with an emphasis on politics, government and public policy; plan a career in government service or public administration; seek training for positions in foreign service agencies of the United States government, international organizations or corporations; intend to study law; wish to prepare for teaching in the public schools; or intend to work for advanced degrees in political science in preparation for college or university teaching or for government service.

The department offers courses in the following fields:

American government and politics
Comparative politics
International relations
Political theory
Public policy and administration

B.A. IN POLITICAL SCIENCE

Requirements (92 units)

Requirements for the B.A. in Political Science:

1. PSci 100. Introduction to Political Science (4)
2. PSci 203. American Government (4)
3. PSci 204. International Relations (4)
4. PSci 314. American Political Thought (4)
5. American government and politics
Eight units chosen from:
PSci 320. The Legislative Process (4)

- PSci 326. Political Parties and Interest Groups (4)
- PSci 428. Formulation of Public Policy (4)
- PSci 431. The American Presidency (4)
6. Comparative government
Eight units chosen from:
PSci 300. Western Political Systems (4)
PSci 304. Communist Political Systems (4)
PSci 306. Developing Political Systems (4)
PSci 308. Government and Politics of the Middle East (4)
7. International relations
Eight units chosen from:
PSci 325. American Foreign Policy (4)
PSci 400. International Politics (4)
PSci 500. International Law (4)
PSci 510. International Organization (4)
8. Political theory
Eight units chosen from:
PSci 310. Classical Political Thought (4)
PSci 311. Foundations of Modern Political Thought (4)
PSci 313. Contemporary Political Thought (4)
PSci 315. Marxist Political Thought (4)
9. Public law
Eight units chosen from :
PSci 328. Judicial Process (4)
PSci 410. American Constitutional Law (4)
PSci 411. The Bill of Rights (4)
PSci 412. Civil Rights (4)
10. Twelve additional units of electives in upper-division course work in political science, four of which must be chosen from:
PSci 530. Studies in Political Theory (4)
PSci 535. Seminar in Constitutional Law (4)
PSci 540. Seminar in Comparative Politics (4)
PSci 590. Seminar in International Relations (4)
PSci 592. Seminar in Government (4)

11. Foreign Language Requirement (24 units)

Political science majors must fulfill a two-year requirement in foreign language by completion of 24 units of department-approved coursework or demonstration of equivalent proficiency.

Note: The following will count as electives only after approval by the department chair:

- PSci 575. Internship in Political Science
PSci 595. Independent Study

With approval of the department chair, up to eight units in related fields may be counted toward the upper-division course requirement in political science.

Note: Students in the political science major must meet their general education mathematics requirement by taking four units chosen from:

- Math 110. College Algebra (4)
Math 120. Pre-Calculus Mathematics (4)
Math 211. Basic Concepts of Calculus (4)

SINGLE SUBJECT WAIVER PROGRAM

Requirements (68 units)

Requirements for the Single Subject Waiver Program:

1. PSci 100. Introduction to Political Science (4)
2. PSci 203. American Government (4)
3. PSci 204. International Relations (4)
4. PSci 306. Developing Political Systems (4)
5. PSci 314. American Political Thought (4)
6. PSci 330. State and Local Politics (4)
7. PSci 410. American Constitutional Law (4)
8. PSci 450. Political Socialization (4)
9. *Four units chosen from:*
 - PSci 300. Western Political Systems (4)
 - PSci 304. Communist Political Systems (4)
10. *Four units chosen from:*
 - PSci 411. Bill of Rights (4)
 - PSci 412. Civil Rights (4)
11. *Four units chosen from:*
 - PSci 400. International Politics (4)
 - PSci 500. International Law (4)
 - PSci 510. International Organization (4)
12. *Four units chosen from:*
 - PSci 310. Classical Political Thought (4)
 - PSci 311. Foundations of Modern Political Thought (4)
 - PSci 313. Contemporary Political Thought (4)
13. Twenty units to be chosen from upper-division political science electives. With the approval of the department chair, up to eight units of upper-division course work in related fields may be counted toward the upper-division elective course requirements in the major.

MINOR IN POLITICAL SCIENCE

Requirements (32 units)

Requirements for a minor in Political Science

1. PSci 100. Introduction to Political Science (4)
2. PSci 203. American Government (4)
3. PSci 314. American Political Thought (4)
4. Twenty units of upper-division political science course work chosen in consultation with an advisor.

MINOR IN PRE-LAW

Requirements (28 units)

Requirements for a minor in Pre-law:

1. PSci 328. Judicial Process (4)
2. PSci 410. American Constitutional Law (4)
3. PSci 411. The Bill of Rights (4)
4. PSci 535. Seminar in Constitutional Law (4)

5. Twelve units chosen from:

May choose only one of the following:

- CJus 370. Law and Society (4)
- Soc 359. Law and Society (4)
- CJus 380. Juvenile Justice System (4)
- Hist 540. Constitutional History of the United States (4)
- Mgmt 330. Legal Environment of Business (4)
- PA 472. Administrative Law (4)

May choose one of the following three courses:

- Phil 466A. Philosophy of Law: The Concept of Law (4)
- Phil 466B. Philosophy of Law: Morality and the Law (4)
- Phil 466C. Philosophy of Law: Rights and the Law (4)
- PSci 500. International Law (4)

DEPARTMENTAL HONORS

Students majoring in political science are eligible to receive honors in political science at graduation when they meet the following requirements:

1. A 3.5 grade point average in all political science courses attempted;
2. At least half of all work in political science completed at this university;
3. Recommendation for departmental honors by political science faculty.

PI SIGMA ALPHA

Students majoring in political science who have a grade point average of at least 3.0 ("B") overall and 3.0 ("B") in the major have the opportunity to join Pi Sigma Alpha, the national honor society in political science. Additional information can be obtained from the Department of Political Science.

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in International Relations

Certificate Requirements (32 units)

1. Twenty units chosen from:

- A. PSci 300. Western Political Systems (4)
- B. PSci 304. Communist Political Systems (4)
- C. PSci 306. Developing Political Systems (4)

- D. PSci 325. American Foreign Policy (4)
- E. PSci 400. International Politics (4)
- F. PSci 484. National Security Policy (4)
- G. PSci 500. International Law (4)
- H. PSci 510. International Organization (4)
- I. Four of the twenty units may be chosen from:
 - PSci 480A. International Relations in the Pacific Basin: Regional Affairs (4)
 - PSci 480B. International Relations in the Pacific Basin: East Asia (4)
 - PSci 480C. International Relations in the Pacific Basin: Southeast Asia (4)
 - PSci 480D. International Relations in the Pacific Basin: Oceania (4)
 - PSci 480E. International Relations in the Pacific Basin: Philippines (4)
 - PSci 480F. International Relations in the Pacific Basin: Japan (4)
 - PSci 480G. International Relations in the Pacific Basin: Korea (4)
 - PSci 480H. International Relations in the Pacific Basin: Singapore (4)
 - PSci 480J. International Relations in the Pacific Basin: Indonesia (4)

2. *Twelve units chosen from:*

- Econ 420. Comparative Economic Systems (4)
- Econ 430. International Economics (4)
- Econ 435. Multinational Corporations (4)
- Econ 450. Economic Development (4)
- Hist 556. Foreign Relations of the United States (4)
- Mktg 470. International Marketing Management (4)
- SSci 300. Nonwestern World (4)

COURSE OFFERINGS IN POLITICAL SCIENCE (PSci)

Lower Division

100. Introduction to Political Science

Introduction to the scope of the discipline, to its basic philosophical concepts and methods, and to political action in various cultural contexts. (4 units)

203. American Government

Political structure and processes of the American governmental system. This course meets the state code requirements in U.S. Constitution and state and local government. (CAN GOVT 2) (4 units)

204. International Relations

A survey of major regions and ideologies of the world, and of the basic concepts of foreign and security policies, international political economy, international law, and international organizations. (4 units)

Upper Division

300. Western Political Systems

Major Western political systems. (4 units)

304. Communist Political Systems

Examination of the relationships among communist political systems. (4 units)

306. Developing Political Systems

Political systems, governmental structures, political orientation and foreign policies of developing nations. (4 units)

308. Government and Politics of the Middle East

Governmental and political structures of representative states in the Middle East, including Turkey, Israel, and the Arab States. (4 units)

310. Classical Political Thought

Classical political thought through a consideration of representative political thinkers such as Plato, Aristotle, Thucydides, Cicero, Lucretius. (4 units)

311. Foundations of Modern Political Thought

Major political ideas of the early modern period ranging from Machiavelli through Hobbes, Locke, Rousseau and Burke. (4 units)

313. Contemporary Political Thought

Political ideas of nineteenth and twentieth century theorists (other than the Marxists). (4 units)

314. American Political Thought

American political ideas from the colonial period to the present. This course meets the state code requirement in U.S. history. (4 units)

315. Marxist Political Thought

Political ideas of Marx, Engels, Lenin and other Marxist theorists. (4 units)

320. The Legislative Process

Law-making processes in the United States and/or other selected political systems. (4 units)

325. American Foreign Policy

Political analysis of American foreign policy with emphasis on foreign policy making in the nuclear age. (4 units)

326. Political Parties and Interest Groups

Organization, objectives and activities of political parties and political interest groups and their functions in modern political systems. (4 units)

328. Judicial Process

Process of judicial decision-making with emphasis on factors influencing that process and concepts of judicial roles. (4 units)

330. State and Local Politics

Comparison of state and local political systems within the American Federal System. This course meets the state code requirement in state and local government. (4 units)

332. California Government

The California Constitution, government and political institutions. This course is specifically designed to meet the state code requirement in state and local government. (2 units)

340. Sex and Politics

Emphasis will be on sex roles in traditional and modern political systems, sex stereotypes in politics; effects of changing technology on conventional male and female roles; dynamics of change affecting the woman's place in the political world. (4 units)

342. The Politics of Environment

Environmental problems in their political context, including air, water, thermal and noise pollution, solid waste, population growth, resource management, and the political costs and benefits of environmental protection. (4 units)

352. Minority Politics

Minority groups in the American political system. Course may be repeated as topics change.

- A. Ethnic Politics. Study of immigration with emphasis on the political development of major civil rights activities in the U.S. (4 units)
- B. African American Politics. Perspectives, styles, problems and dynamics of political activity in African American communities. (4 units)
- C. Latino Politics. Contemporary issues and public policy questions in the Latino/Chicano communities. (4 units)
- D. Asian American Politics. Political factors affecting the Asian American communities. (4 units)
- E. Native American Politics. Political factors affecting Native American communities. (4 units)

375. Introduction to Political Science Research

Basic ideas and research topics used by political scientists with topics to include theory construction, research design, quantitative methods and philosophy of science. *Prerequisites: Political Science 314 and Mathematics 110.* (4 units)

380. Introduction to Public Administration

An introduction to the purposes, methods and characteristics of public management, including organization of public services, roles and relationships of public administrators, accountability and the achievement of public goals. (Also offered as Public Administration 380. Students may not receive credit for both.) (4 units)

400. International Politics

Selected theories and evolving patterns of international politics as developed within the nation-state system. (4 units)

410. American Constitutional Law

Principles of the American Constitution as announced by the Supreme Court in selected cases. Judicial review, separation of powers, presidential power, federalism and commerce are included. This course meets the state code requirement in the U.S. Constitution. (4 units)

411. The Bill of Rights

Limitation on federal and state power arising out of the provisions of the first eight and the 14th Amendments to the Constitution. Modern developments are stressed. This course meets the state code requirement in the U.S. Constitution. (4 units)

412. Civil Rights

Jurisprudence of the 13th, 14th and 15th Amendments as articulated by the U.S. Supreme Court. (4 units)

428. Formulation of Public Policy

Basic approaches to public policy analysis, emphasizing interaction between substance and process in policy development. (4 units)

431. The American Presidency

Office and institution of the presidency of the United States. (4 units)

440. Voting Behavior

Factors related to voting behavior and other forms of political involvement, including analysis and interpretation of electoral decisions. (4 units)

450. Political Socialization

Application of political theory and research to the political education and socialization of children. Major attention devoted to the problems of children's political orientations, their sources and formation. (4 units)

480. International Relations in the Pacific Basin

Examines foreign policies of countries in selected regions of the Pacific Basin, such as East Asia, Southeast Asia, Oceania, the Philippines, Japan, Korea, Singapore, Indonesia. May be repeated twice as topics change.

- A. Regional Affairs (4 units)
- B. East Asia (4 units)
- C. Southeast Asia (4 units)
- D. Oceania (4 units)
- E. Philippines (4 units)
- F. Japan (4 units)
- G. Korea (4 units)
- H. Singapore (4 units)
- J. Indonesia (4 units)

481. Contemporary African Politics

The politics and governments of African states since independence. The course shall examine key issues in colonial rule in Africa, struggle for African independence, nationalism and the problems of self-government. Course may be repeated twice as topics change.

- A. Regional Affairs (4 units)
- B. Francophone Africa (4 units)
- C. North Africa (4 units)
- D. Southern Africa (4 units)
- E. West Africa (4 units)
- F. East Africa (4 units)
- G. Horn of Africa (4 units)
- H. Lusophone Africa (4 units)
- I. South Africa (4 units)

484. National Security Policy

Introduction to concepts and principles of national security policy through an examination of topics in international relations, foreign policy, arms control, strategic thought and alliance strategy. (4 units)

500. International Law

Historical basis and present trends in the development of international law. (4 units)

510. International Organization

History, structure and dynamics of the United Nations and other multi-national organizations. (4 units)

515. Model United Nations

An analysis of the role of the U.N. in world politics to prepare students for the national U.N. competition. Particular emphasis is placed on foreign policy of the country to be represented and the internal and external factors on which that policy is based.

A. Winter Quarter *Prerequisite: consent of instructor.* (2 units)

B. Spring Quarter *Prerequisites: Political Science 515A and consent of instructor.* (2 units)

530. Studies in Political Theory

Concentrated study of one political theorist or one subject in political theory. May be repeated for credit as topics change. (4 units)

535. Seminar in Constitutional Law

Intensive study in one or more aspects of constitutional law. *Prerequisite: one of the following: Political Science 328, 410, 411, History 540 or consent of instructor.* (4 units)

540. Seminar in Comparative Politics

Theories, methods, and paradigms of comparative politics. (4 units)

560. Intergovernmental Relations

Administrative and political dynamics of relationships among national, state and local units of government. (4 units)

575. Internship in Political Science

Supervised work and study in public and private organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and department.* (Credit to be arranged: 2 to 4 units)

590. Seminar in International Relations

Intensive study of some phase of foreign policy-making or international relations to be developed by instructor with class. May be repeated for credit, with consent of instructor. (4 units)

592. Seminar in Government

An intensive study of some phase of government to be developed by instructor with class. May be repeated for credit, with the consent of instructor. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of eight units in Political Science 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 4 units)

597. Senior Honors Thesis

In-depth research culminating in a written thesis. Written proposals will be invited from seniors with a 3.5 GPA in all political science courses. Enrollment is limited to those students whose proposals are approved by the Political Science Honors Thesis Committee. (4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Theory and History of Strategy

Examination of the literature on strategy, from ancient to modern times and from various cultures. Both theoretical and practical methods will be covered. *Prerequisite: Political Science 484 or equivalent.* (4 units)

601. Strategic Systems and Strategic Thought

Evolution of strategic thought, policy, doctrine and force structure relative to national security objectives. *Prerequisite: Political Science 484 or equivalent.* (4 units)

602. Regional Security

Examination of security problems in various regions of the world using both theoretical and policy-related approaches. *Prerequisite: Political Science 484 or equivalent.* (4 units)

604. Seminar in International Law

Survey of the literature and a study of the Law of the Sea, Aerospace Law, and International Regulation of the use of Force. (4 units)

605. Topics in Strategy

Intensive study of a specific phase or area of defense strategy developed by the instructor. May be repeated once for credit, as topics change, with consent of student's advisor. (4 units)

609. International Relations Theory

An examination of the theoretical literature on international relations, including issues of war and peace, foreign relations, and international security. Formerly Political Science 605F. (4 units)

610. Proseminar in Political Science

Survey of the concepts and ideas that political scientists study, how they approach the study of political phenomena, and what methods they employ in their analysis. The seminar will include discussion of the relationships of the discipline to other social science disciplines and the unique contributions political science has made to knowledge in general and in the social sciences. *Prerequisite: consent of instructor.* (4 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than coursework) for the master's degree. Students enrolled in this course have full use of university facilities. *Prerequisites: completion of coursework and consent of program director.* (0 units)

699. Thesis

Prerequisites: completion of coursework and consent of thesis committee. (2 units)

PSYCHOLOGY

Department of Psychology

Physical Sciences Building, Room 214
880-5570

Bachelor of Arts

Psychology

Minor

Psychology

Master of Arts

Psychology

(Degree requirements can be found on Page 404.)

Master of Science

Psychology

(Degree requirements can be found on Page 405.)

FACULTY: David Chavez, Yu-Chin Chien, Gloria Cowan, Robert Cramer, Stuart Ellins, Janelle Gilbert, Diane Halpern, Chuck Hoffman (Chair), Laura Kamptner, Elizabeth Klonoff, Hideya Koshino, Janet Kottke, Faith McClure, Sanders McDougall, Kelly Morton, Fred Newton, Hannah Nissen, Jean Peacock, Robert Ricco, David Riefer, Matt Riggs, Gerard Saucier, Kenneth Shultz, Geraldine Stahly, Edward Teyber, Michael Weiss, Eugene Wong, Joanna Worthley

The general objectives of the Bachelor of Arts in Psychology are to present the scientific and professional aspects of psychology to the undergraduate majoring in this field and to provide service courses as electives for students throughout the university. The department also offers course work leading to the Master of Arts or the Master of Science in Psychology. Students intending to enroll in these programs or another graduate school will find that the undergraduate program provides an excellent base for entry into graduate training. Other majors may plan a paraprofessional career in counseling or related fields where graduate training may not be necessary.

Courses offered by the department range from the basic scientific courses such as experimental psychology, learning and perception to such applied courses as counseling and behavior modification. Laboratory and training facilities complement a wide variety of courses.

B.A. IN PSYCHOLOGY

Requirements (60-61 units)

Requirements for the B.A. in Psychology:

1. Psyc 100. Introduction to Psychology (4)
2. Choose one of the following:
Psyc 210. Psychological Statistics (5)
SSci 215. Statistics for the Social Sciences (4)
3. Psyc 311. Introduction to Experimental Psychology (6)
4. Six units chosen from:
Psyc 431. Experimental Psychology: Developmental (6)

- Psyc 433. Experimental Psychology: Physiological (6)
Psyc 434. Experimental Psychology: Social (6)
Psyc 435. Experimental Psychology: Personality (6)
Psyc 436. Experimental Psychology: Learning and Motivation (6)
Psyc 437. Experimental Psychology: Cognition and Perception (6)
Psyc 438. Experimental Psychology: Industrial and Organizational (6)

5. Fields of Psychology

Eight units chosen from:

- Psyc 201. Developmental Psychology (4)
Psyc 382. Psychology of Social Behavior (4)
Psyc 385. Personality (4)
Psyc 390. Abnormal Psychology (4)

6. Basic Processes

Eight units chosen from:

- Psyc 357. History and Systems of Psychology (4)
Psyc 360. Cognitive Psychology (4)
Psyc 362. Learning and Motivation (4)
Psyc 363. Biological Psychology (4)
Psyc 364. Perception (4)

7. Applications

Four units chosen from:

- Psyc 315. Communication Processes (5)
Psyc 318. Health Psychology (4)
Psyc 351. Behavior Modification: Principles and Applications (4)
Psyc 355. Industrial Psychology (4)
Psyc 377. Tests and Measurements (4)
Psyc 386. Introduction to Psychotherapy (4)
Psyc 387. Community Psychology (4)
Psyc 575. Internship in Psychology (4)

8. Twenty units in upper-division psychology electives. (Psychology 201 may be used to satisfy four of these additional twenty units but does not satisfy the university's upper-division unit requirement.)

Students intending to apply to doctoral programs in psychology are encouraged to take the following courses:

- Psyc 357. History and Systems of Psychology
Psyc 595. Independent Study

Students interested in other educational and career goals have the opportunity to either diversify or concentrate their studies according to individualized plans developed in consultation with a departmental advisor.

MINOR IN PSYCHOLOGY

Requirements (32 units)

Requirements for a minor in Psychology:

1. Psyc 100. Introduction to Psychology (4)
2. Fields of Psychology
Four units chosen from:
Psyc 201. Developmental Psychology (4)
Psyc 382. Psychology of Social Behavior (4)
Psyc 385. Personality (4)
Psyc 390. Abnormal Psychology (4)

3. Basic Processes

Four units chosen from:

- Psyc 357. History and Systems of Psychology (4)
- Psyc 360. Cognitive Psychology (4)
- Psyc 362. Learning and Motivation (4)
- Psyc 363. Biological Psychology (4)
- Psyc 364. Perception (4)

4. Applications

Four units chosen from:

- Psyc 315. Communication Processes (5)
- Psyc 318. Health Psychology (4)
- Psyc 351. Behavior Modification: Principles and Applications (4)
- Psyc 355. Industrial Psychology (4)
- Psyc 377. Tests and Measurements (4)
- Psyc 386. Introduction to Psychotherapy (4)
- Psyc 387. Community Psychology (4)
- Psyc 575. Internship in Psychology (4)

5. Sixteen units in upper-division psychology electives are required. (Psychology 201 may be used to satisfy four of these additional sixteen units but does not satisfy the university's upper-division unit requirement.)

DEPARTMENTAL HONORS

Students majoring in psychology are eligible to receive honors in psychology at graduation if the following conditions are met:

1. At least one-half of the course work required by the major is completed at this university;
2. At least 3.5 grade point average in the major;
3. An overall grade point average of 3.25 or better;
4. Completion of the three-quarter Honors Program with a grade of "B" (3.0) or better each quarter:
 - Psyc 597. Honors Seminar
 - Psyc 598A. Honors Project
 - Psyc 598B. Honors Project

Students interested in this recognition must file a formal application for enrollment in the Psychology Honors Program at the end of their junior year.

COURSE OFFERINGS IN PSYCHOLOGY (Psyc)

Lower Division

100. Introduction to Psychology

A survey of the field of modern psychology. (CAN PSY 2) (4 units)

105. Critical Thinking Through Problems Analysis

Development of basic skills in critical thinking including identifying and understanding common fallacies, recognizing techniques of persuasion and propaganda, problem solving strategies, and applying skills of critical thinking to the complex issues of everyday life. (4 units)

115. Personal and Social Adjustment

Application of psychological principles to predictable challenges and problems over the life span. Explores opportunities for adjustment and growth in a variety of circumstances, such as family and college life. May not be counted toward fulfillment of requirements in the psychology major. Formerly Psychology 110. (2 units)

120. Career Development

Examination of the world of work and individual self-assessments, including exploration of career aspirations and goals. (2 units)

201. Developmental Psychology

Introduction to the psychological development of the person from the prenatal period through old age. *Prerequisite:* Psychology 100. (4 units)

210. Psychological Statistics

Introduction to statistical reasoning and application of basic statistical procedures in psychology. Includes both descriptive and inferential statistics with emphasis on parametric techniques. Credit may not be received for more than one of the following courses: Management Science 210, Psychology 210, or Social Sciences 215. Four hours lecture and three hours of laboratory. (CAN PSY 6) (5 units)

270. Infant and Toddler Development

Prenatal, neonatal, infant, and toddler development through age 2. Formerly Psychology 325. *Prerequisite:* Psychology 100. (4 units)

280. Early Childhood Development

Physical, social, emotional, and intellectual development of the young child from ages 2 to 5. Laboratory involves observation of young children. Four hours lecture and three hours laboratory. (Also offered as Human Development 280. Students may not receive credit for both.) Formerly Psychology 325. *Prerequisite:* Psychology 100. (5 units)

Upper Division

301. Psychology of Human Sexuality

Theory and empirical findings from the areas of social, developmental, physiological, and clinical psychology as they apply to human sexual behavior. (4 units)

302. Management and Organizational Behavior

Introduction to management as it affects operations and the behavior of people in relation to the functional fields of administration. Selected behavioral concepts analyzed with respect to applications in management. (Also offered as Management 302. Students may not receive credit for both.) (4 units)

303. Parenting and Family Relations

Effects of parenting and intra-family relations on child and life-span psychological development. *Prerequisites:* Psychology 100 and 201 or equivalent. (4 units)

305. Psycholinguistics

An introduction to theory and research on the psychological study of language, first language acquisition, and the relation of language to thought and culture. *Prerequisite: Psychology 100.* (4 units)

311. Introduction to Experimental Psychology

Design and execution of psychological research. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 100; and Psychology 210 or Social Sciences 215.* (6 units)

315. Communication Processes

Introduction to the nature of the helping process with emphasis on strategies of behavior change, interpersonal communication and basic helping skills. Four hours lecture and two hours laboratory. *Prerequisite: Psychology 100.* (5 units)

318. Health Psychology

Examination of psychological aspects of health related behaviors with emphasis on the effects of interpersonal and social psychological factors on physical health and effective medical care. *Prerequisite: Psychology 100.* (4 units)

320. Psychology of Middle Childhood

Theories and their applications to physical, cognitive, social and emotional development during the middle childhood years. A field based component will be required. (4 units)

328. Psychology of Adolescent Development

Theory and empirical literature concerning the physical, cognitive, social, and emotional changes from puberty to adulthood. A field based component will be required. (4 units)

329. Psychology of Adulthood and Aging

An examination of physical, social, cognitive, and personality development from young adulthood through death. Special attention is given to theory, research, and applications in the area of gerontology. *Prerequisites: Psychology 100 and 201, or consent of instructor.* (4 units)

331. The Psychology of Women

A critical study of theory and data on the psychological development of females; their attitudes, behaviors, psychopathologies, abilities and self-images. *Prerequisite: Psychology 100.* (4 units)

332. Biofeedback

A survey of the biofeedback literature with emphasis on research findings, clinical applications and theory underlying voluntary control of brainwaves, muscle activity, heart rate and other bodily responses. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

333. Drugs and Behavior

Analysis of drugs from psychological, behavioral and physiological viewpoints. Topics include drug classification, altered states of consciousness, addiction, chemical nature and treatment of mental illness. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

334. Addiction and Recovery

Research and theories related to the psychological, behavioral and physiological basis of addiction and recovery. A variety of common addictive disorders will be considered including eating, smoking, gambling, work, sex and drugs. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

340. Prejudice, Race, and Racism

Psychological and sociological theories and research on prejudice and racism in the U.S. and other countries, emphasizing the development and change of racial attitudes. (4 units)

345. Cross-Cultural Psychology

Crosscultural psychology focusing on cultural variability in basic psychological processes and the cultural limits of traditional psychological theories. (4 units)

349. The Psychology of Gays and Lesbians

Analysis of theories and research on homosexuality, social reactions to homosexuality, and gay and lesbian cultural adaptations. (4 units)

350. Development of Exceptional Children

Review of theory, assessment, management, and rehabilitation of exceptional children. Includes developmental implications of specific medical conditions, retardation, and learning/cognitive dysfunctions. *Prerequisites: Human Development 280, Psychology 201, or 280.* (4 units)

351. Behavior Modification: Principles and Applications

Analysis of the theory, techniques and ethics of behavior modification. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

355. Industrial Psychology

Practices of modern industrial and personnel psychology. Includes selection, placement, training, motivation, job analysis, evaluation and human factors. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

357. History and Systems of Psychology

A historical framework for integrating basic orientations in contemporary psychology, including the development of the major schools of thought in psychology. Formerly Psychology 498. *Prerequisite: Psychology 100.* (4 units)

358. Cognitive Development

Survey of the major theories, issues and research in the development of perceptual and cognitive capacities from childhood through adulthood. *Prerequisites: Psychology 100 and 201.* (4 units)

360. Cognitive Psychology

Research and theories concerning human information processing; topics include sensory processes, attention, memory, language and other higher mental processes. *Prerequisite: Psychology 100.* (4 units)

362. Learning and Motivation

Survey of research and major theories in animal and human learning and motivation. Applications of learning and motivational principles. *Prerequisite: Psychology 100.* (4 units)

363. Biological Psychology

Overview of the biological basis of behavior with emphasis on the relationship between brain function and thought, emotion, perception, language, learning, memory and motivation. *Prerequisite: Psychology 100.* (4 units)

364. Perception

Selected topics in the field of perceptual processes. Includes review of contemporary theories and research. Class demonstrations and mini-projects. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

366. Computer Applications in Psychology

A survey of the uses of computers in psychology. Topics include the application of computers in psychological research and statistical data analysis. Three hours lecture and three hours laboratory. *Prerequisites: Psychology 100 and one of the following: Management Science 210, Psychology 210, Social Sciences 215; or consent of instructor.* (4 units)

370. Topics in Psychology

Selected psychology topics with specific focus within relatively narrow content areas. May be repeated for credit as topics change. *Prerequisite: Psychology 100.* (2 units)

375. Seminar in Psychology

Selected topics which encompass areas of current theoretical and/or research interest in psychology. May be repeated for credit as topics change. *Prerequisite: Psychology 100.* (4 units)

377. Tests and Measurements

Administration of psychological tests and scales; interpretation and use of the data which they yield. *Prerequisites: Psychology 100; and one of the following: Psychology 210 or Social Sciences 215.* (4 units)

382. Psychology of Social Behavior

Major concepts, issues and psychological research regarding social influence on individual behavior. *Prerequisite: Psychology 100.* (4 units)

384. Personality and Social Development

Development of personality, emotions and social behavior from childhood through adulthood. *Prerequisites: Psychology 100 and 201 or equivalents.* (4 units)

385. Personality

Survey of the major theories of personality. A self-paced version of this course (Psychology 385S) is also available. Students may not receive credit for both. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

386. Introduction to Psychotherapy

Introduction to theories, methods and research in psychotherapy. Formerly Psychology 490. *Prerequisite: Psychology 100.* (4 units)

387. Community Psychology

Comprehensive study of the discipline of community psychology which emphasizes the relationship of community resources to individual mental health needs. *Prerequisite: Psychology 100.* (4 units)

390. Abnormal Psychology

An introduction to psychopathology, emphasizing the major interpretations and treatments of emotional and behavioral disorders. A self-paced version of this course (Psychology 390S) is also available. Students may not receive credit for both. *Prerequisite: Psychology 100 or consent of instructor.* (4 units)

391. Psychopathology of Childhood

Psychological and emotional disorders of children with special emphasis on diagnostic and clinical treatment. *Prerequisites: Psychology 100 and 201.* (4 units)

395. Psychology of Consciousness

Human consciousness from the perspectives of the experiential, behavioral and physiological psychology literatures. Includes survey of research and theory on topics such as waking consciousness, dreams, meditation and altered states of consciousness. *Prerequisite: Psychology 100.* (4 units)

400. Child Assessment

Theory and procedures for assessing cognitive, social, and motor abilities in infants and children. Course includes a practicum in administering and interpreting selected developmental screening tests. *Prerequisites: Human Development 280, Psychology 201, or 280; and Psychology 210 (or equivalent).* (5 units)

410. Advanced Psychological Statistics

Coverage of advanced statistical reasoning and application of statistical procedures in psychology. Includes both parametric and nonparametric techniques with an introduction to multivariate statistics. Statistical computer packages will be introduced. Four hours lecture and three hours laboratory. *Prerequisites: Psychology 210, Management Science 210, or Social Sciences 215; or consent of instructor.* (5 units)

411. Psychology of Mass Media Communication

Influence of mass media (radio, movies, television) on the individual. Developmental aspects will be stressed along with attention to applications in everyday life. Communications research will be highlighted. *Prerequisite: Psychology 311 or Sociology 308.* (4 units)

431. Experimental Psychology: Developmental

Selected research areas in the fields of child and life-span developmental psychology. Includes review of current literature and experimental techniques in developmental research. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 201; Psychology 311 or consent of instructor.* (6 units)

433. Experimental Psychology: Physiological

Introduction to the neural and endocrine processes underlying brain function and behavior. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 311 and 363 or consent of instructor.* (6 units)

434. Experimental Psychology: Social

Methods, theories and empirical results of experimental social psychology in selected areas such as group dynamics, social perception, communication and attitudes. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 311 and 382.* (6 units)

435. Experimental Psychology: Personality

Empirical study of personality theories and the relationship of personality to behavior. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 311, 377 and 385.* (6 units)

436. Experimental Psychology: Learning and Motivation

Selected theories and research in areas of learning and motivation. Includes literature review and experimental analysis. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 311 and 362.* (6 units)

437. Experimental Psychology: Cognition and Perception

Empirical study of human information processing, memory, thought and perceptual processes. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 311 and either Psychology 360 or 364.* (6 units)

438. Experimental Psychology: Industrial and Organizational

Methods and empirical study of industrial-organizational psychology, in selected areas such as work motivation, performance evaluation, training techniques, and selection approaches. Four hours lecture and six hours laboratory. *Prerequisites: Psychology 311, 377 and one of the following: Management 302, Psychology 302, Psychology 355.* (6 units)

575. Internship in Psychology

Supervised work and study in private or public organizations. May be repeated once for credit. (Only four units of Psychology 575 may be applied to upper-division elective requirements in the psychology major.) Graded credit/no credit. *Prerequisites: consent of instructor and department.* (4 units)

581. Seminar in Industrial/Organizational Psychology

Selected topics in industrial/organizational psychology. M.S. I/O option candidates are required to take all three topics. May not be repeated for credit. *Prerequisites: upper-division or graduate standing and consent of department.*

- A. Current Professional Issues (2 units)
- B. Professional Standards and Practice (2 units)
- C. Problem Definition (2 units)

595. Independent Study

Special topics involving literature and/or experimental effort. A total of eight units of Psychology 595 may be applied toward graduation, of which a maximum of four units can be applied toward the upper-division requirements in the psychology major. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 4 units)

597. Honors Seminar

Provides an opportunity for students to develop an independent project under faculty supervision. Students will meet as a class to discuss their projects, as well as various advanced topics. Enrollment is limited to students whose formal application for departmental honors is approved. *Prerequisites: Psychology 311 and consent of department.* (4 units)

598. Honors Project

Provides an opportunity for students to conduct an independent project under faculty supervision. Enrollment is limited to students whose formal application for departmental honors is approved. May not be used to satisfy the requirements of the psychology major.

- A. *Prerequisites: Psychology 597 and consent of department.* (2 units)
- B. *Prerequisites: Psychology 598A and consent of department.* (2 units)

PUBLIC ADMINISTRATION

Department of Public Administration

*Jack Brown Hall, Room 456
880-5758*

FACULTY: David Bellis, Chuck Christie, Michael Clarke, Guenther Kress, J. Brian Watts, Clifford Young (Chair)

The university offers a Masters in Public Administration. In addition, a concentration in public administration is available within the Bachelor of Arts in Administration. A Certificate in Local Government Planning is also available. The details of these programs are listed under Administration on Page 75. The Master of Public Administration can be found on Page 411. The courses listed below are offered in support of these programs. Further information is available from the Department of Public Administration.

COURSE OFFERINGS IN PUBLIC ADMINISTRATION (PA)

Upper Division

307. Public Relations in the Public Sector

Public relations as an inherent aspect of management in the public sector. Problems and techniques of administration of programs to manage and improve public relations. (4 units)

315. Government-Business Relations

Study of public-private sector interactions and the respective roles of government and business in these relationships. Government's evolving role in economic life; the context of government-business relations; the maintenance and moderation of competition; specific problems in government-business interactions. (4 units)

380. Introduction to Public Administration

An introduction to the purposes, methods and characteristics of public management, including organization of public services, roles and relationships of public administrators, accountability and the achievement of public goals. (Also offered as Political Science 380. Students may not receive credit for both.) (4 units)

462. Public Personnel Administration

Definition, description and evaluation of government personnel systems; classification, compensation, recruitment, examination, training, working conditions, incentives, performance ratings, public employee organizations and organizational development in the public service. Formerly Public Administration 562. (4 units)

463. Governmental Budgeting

Role of the budgetary process in government management, the public sector environment of budgeting, budget formulation and administration. Formerly Public Administration 563. (4 units)

472. Administrative Law

Processes of administrative rule making, regulation, adjudication and appeal procedures; duties and liabilities of public officials, trends in regulation, overview of regulatory agencies. (4 units)

480. Organizational Problems in Public Administration

Administrative and management problems as they exist within public organizations and agencies. (4 units)

514. Management of Private Nonprofit Organizations

Analyzes the specific problems of management in private nonprofit organizations, including planning, personnel, financial and policy issues. (4 units)

516. Public and Non-Profit Project Management

Aspects of project management, including needs and feasibility assessment, project design, proposal writing, contract negotiation, funding, developing project teams, managing team conflict, monitoring, and evaluation. Three hours lecture and two hours activity laboratory. (4 units)

521. Principles of Planning

Introduction to local and regional community planning; includes methods of adoption and interorganizational relationships. (4 units)

548. Management of Computers in the Public Sector

Designed to help students gain competency in computer related skills. Each topic may be taken once for credit. Three hours lecture and two hours activity laboratory.

- A. Word Processing (4 units)
- B. Data Base Management (4 units)
- C. Spread Sheet (4 units)
- D. Communication (4 units)
- E. Networking (4 units)
- F. Special Problems (4 units)

557. Public Sector Labor Relations

Analyzes issues created by collective bargaining and unionism in public sectors. Examples: selection of bargaining agents, bargaining scope and obligation, impasse resolution and grievance procedure. (4 units)

564. Local Public Administration

Administrative characteristics and problems of public management in the urban area, including city, county, school and special district organization and functions. (4 units)

568. Accounting for Government and Not-for-Profit Organizations

Covers principles and practices of government fund accounting. Topics include governmental accounting concepts, types and structure of funds and accounts, application of generally accepted accounting principles to government and not-for-profit entities, presentation and uses of financial statements. (Also offered as Accounting 568. Students may not receive credit for both.) *Prerequisite: Accounting 211 or 311.* (4 units)

575. Internship in Public Administration

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Public Administration

An intensive study of some phase of public administration to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

SOCIAL SCIENCES

School of Social and Behavioral Sciences

Faculty Office Building, Room 175
880-5500

Bachelor of Arts

Social Sciences

Teaching Credential Program

Single Subject

Master of Arts

Social Sciences

(Degree requirements can be found on Page 420.)

COORDINATOR: Robert Blackey

The social sciences major is designed for those students who wish to blend any three of the disciplines represented in the School of Social and Behavioral Sciences. Students seeking the single subject teaching credential in social science will not be able to meet the requirements with this major alone. See the Teaching Credential Program section which follows.

B.A. IN SOCIAL SCIENCES

Requirements (60 to 63 units)

A minimum of 28 to 30 units (primary) in one of the following fields, plus 16 to 17 units each (secondary) in two others:

- A. Anthropology
- B. Criminal Justice
- C. Economics
- D. Geography
- E. History
- F. Political Science
- G. Psychology
- H. Sociology

Of the 28 to 30 units comprising the primary field, no more than twelve units may be from the lower-division courses. In each secondary field, no more than eight units may be from lower-division courses.

Within the social sciences major, cross-listed courses cannot be counted both in a primary field and in a secondary field.

Those courses which will be required and allowed for use in this track, both in the primary and secondary fields, are listed below. It is the responsibility of both the student and the student's advisor to construct a program in line with these requirements. Once agreed to, the program is filed in the student's permanent folder in the Office of Admissions and Records but is subject to revision by mutual consent. No more than 32 units may be selected from any one department. No more than one 12-unit special comprehensive examination may be applied to any field, either primary or secondary, and not more than two of these examinations may

be used to meet the requirements of this major.

An ethnic studies primary or secondary field may be obtained by taking Social Sciences 155 (Minority Groups in America) and 56 to 59 additional units of upper-division course work from within the School of Social and Behavioral Sciences as stated below. No course may be used in a secondary field which has been used in any other part of the social sciences major.

A special topics primary or secondary field may be contracted with the dean of the School of Social and Behavioral Sciences. Possible topics that may be arranged under this option include, but are not restricted to, women's studies and Latin American studies. For more information concerning this option, contact the dean of the School of Social and Behavioral Sciences.

Requirements for the B.A. in Social Sciences

Anthropology (Primary Field 28 units, Secondary Field 16 units)

Primary Field (28 units):

1. Anth 100. Introduction to Anthropology: Human Evolution (4)
2. Anth 102. Introduction to Anthropology: Culture and Society (4)
3. A minimum of twelve units chosen from:
 - Anth 300. Archaeology (4)
 - Anth 302. African Archaeology (4)
 - Anth 303. Prehistory of the Middle East and Europe (4)
 - Anth 305. North American Prehistory (4)
 - Anth 306. Aztecs, Maya and Their Predecessors (4)
 - Anth 307. Incas and Their Predecessors (4)
 - Anth 312. Historical Archaeology (4)
 - Anth 315. Archaeology of the Southwest and California (4)
 - Anth 319. Experimental Archaeology and Ethnoarchaeology (5)
 - Anth 320. Archaeological Survey and Excavation (5)
 - Anth 321. Archaeological Laboratory Analysis (5)

May choose only one of the following:

- Anth 323. Native North American Art (4)
- Art 323. Native North American Art (4)

May choose only one of the following:

- Anth 324. Pre-Columbian Art (4)
- Art 324. Pre-Columbian Art (4)
- Anth 325. Human Variation and the Concept of Race (4)
- Anth 326. Human Origins (4)
- Anth 327. Primate Evolution and Ecology (4)
- Anth 330. Cross-Cultural Child-Rearing Practices (4)
- Anth 331. Anthropology of Human Development (4)
- Anth 333. Sex and Gender in Cross-Cultural Perspective (4)

May choose only one of the following:

- Anth 335. Cross-Cultural Perspectives on Crime and Deviance (4)
- Anth 335S. Cross-Cultural Perspectives on Crime and Deviance (Self-paced) (4)
- Anth 351. Indians of North America (4)

- Anth 352. Indians of the Southwest (4)
 Anth 354. Cultures of Mexico and Central America (4)
 Anth 356. Cultures of South America (4)
 Anth 357. African Societies (4)
 Anth 358. Peoples of the Middle East (4)
 Anth 360. Peoples of Australia (4)
 Anth 361. Peoples of Micronesia, Melanesia and Polynesia (4)
 Anth 375. Museum Methods (4)
 Anth 390. Selected Topics in Anthropology (4)
 Anth 391. Selected Topics in Anthropology (2)
4. *Eight units chosen from:*
 Anth 460. Language and Culture (4)
 Anth 466. Anthropology of Health, Illness and Healing (4)
 Anth 470. Culture Change and Dynamics (4)
 Anth 475. Cultural Ecology (4)
 Anth 480. Magic, Religion and Science (4)
 Anth 485. Applied Anthropology and Social Policy (4)
 Anth 490. Systems of Social Organization (4)
 Anth 492. Economic Anthropology (4)
 Anth 493. Urban Anthropology (4)
 Anth 500. Great Ideas in Anthropology (4)
 Anth 575. Internship in Anthropology (2-5)
 Anth 585. Fieldwork in Cultural Anthropology (4)
 Anth 595. Independent Study (2-5)

Secondary Field (16 units):

1. *Choose one of the following:*
 Anth 100. Introduction to Anthropology: Human Evolution (4)
 Anth 102. Introduction to Anthropology: Culture and Society (4)
2. *A minimum of eight units chosen from:*
 Anth 300. Archaeology (4)
 Anth 302. African Archaeology (4)
 Anth 303. Prehistory of the Middle East and Europe (4)
 Anth 305. North American Prehistory (4)
 Anth 306. Aztecs, Maya and Their Predecessors (4)
 Anth 307. Incas and Their Predecessors (4)
 Anth 312. Historical Archaeology (4)
 Anth 315. Archaeology of the Southwest and California (4)
 Anth 319. Experimental Archaeology and Ethnoarchaeology (5)
 Anth 320. Archaeological Survey and Excavation (5)
 Anth 321. Archaeological Laboratory Analysis (5)
- May choose only one of the following:*
 Anth 323. Native North American Art (4)
 Art 323. Native North American Art (4)
- May choose only one of the following:*
 Anth 324. Pre-Columbian Art (4)
 Art 324. Pre-Columbian Art (4)
 Anth 325. Human Variation and the Concept of Race (4)
 Anth 326. Human Origins (4)
 Anth 327. Primate Evolution and Ecology (4)
 Anth 330. Cross-Cultural Child-Rearing Practices (4)

- Anth 331. Anthropology of Human Development (4)
 Anth 333. Sex and Gender in Cross-Cultural Perspective (4)

May choose only one of the following:

- Anth 335. Cross-Cultural Perspectives on Crime and Deviance (4)
 Anth 335S. Cross-Cultural Perspectives on Crime and Deviance (Self-paced) (4)
- Anth 351. Indians of North America (4)
 Anth 352. Indians of the Southwest (4)
 Anth 354. Cultures of Mexico and Central America (4)
 Anth 356. Cultures of South America (4)
 Anth 357. African Societies (4)
 Anth 358. Peoples of the Middle East (4)
 Anth 360. Peoples of Australia (4)
 Anth 361. Peoples of Micronesia, Melanesia and Polynesia (4)
 Anth 375. Museum Methods (4)
 Anth 390. Selected Topics in Anthropology (4)
 Anth 391. Selected Topics in Anthropology (2)
3. *Four units chosen from:*
 Anth 460. Language and Culture (4)
 Anth 466. Anthropology of Health, Illness and Healing (4)
 Anth 470. Culture Change and Dynamics (4)
 Anth 475. Cultural Ecology (4)
 Anth 480. Magic, Religion and Science (4)
 Anth 485. Applied Anthropology and Social Policy (4)
 Anth 490. Systems of Social Organization (4)
 Anth 492. Economic Anthropology (4)
 Anth 493. Urban Anthropology (4)
 Anth 500. Great Ideas in Anthropology (4)
 Anth 575. Internship in Anthropology (2-5)
 Anth 585. Fieldwork in Cultural Anthropology (4)
 Anth 595. Independent Study (2-5)

Criminal Justice (Primary Field 30 units, Secondary Field 16 units)

Primary Field (30 units):

1. CJus 101. Introduction to the Criminal Justice System (4)
 2. CJus 102. Criminal Law (4)
 3. CJus 311. Research Methods in Criminal Justice (4)
 4. CJus 312. Statistics in Criminal Justice (2)
 5. *Twelve units chosen from:*
 CJus 320. Theories of Crime and Delinquency (4)
 CJus 330. Correctional Theory and Institutions (4)
 CJus 340. Police and Police Systems (4)
 CJus 370. Law and the Courts (4)
 6. *Four units chosen from:*
 CJus 103. Critical Issues in Criminal Justice (4)
 CJus 303. Criminal Justice Administration (4)
 CJus 304. Procedure and Evidence (4)
 CJus 575. Internship in Criminal Justice (4)

Secondary Field (16 units):

1. CJus 101. Introduction to the Criminal Justice System (4)

2. CJus 102. Criminal Law (4)
3. *Eight units chosen from:*
 - CJus 303. Criminal Justice Administration (4)
 - CJus 304. Procedure and Evidence (4)
 - CJus 330. Correctional Theory and Institutions (4)
 - CJus 340. Police and Police Systems (4)
 - CJus 370. Law and the Courts (4)

Economics (Primary Field 28 units, Secondary Field 16 units)

Primary Field (28 units):

1. Econ 200. Principles of Microeconomics (4)
2. Econ 202. Principles of Macroeconomics (4)
3. Econ 300. Intermediate Macroeconomics (4)
4. Econ 302. Intermediate Microeconomics (4)
5. Four units of 300-level economics course work.
6. Eight units of 400- or 500-level economics course work.

Secondary Field (16 units):

1. Econ 200. Principles of Microeconomics (4)
2. Econ 202. Principles of Macroeconomics (4)
3. Eight units of upper-division economics course work.

Geography (Primary Field 29 units, Secondary Field 16 to 17 units)

Primary Field (29 units):

1. Geog 100. Introduction to Human Geography (4)
2. Geog 103. Physical Geography (5)
3. Geog 420. Geography of Economic Activity (4)
4. Sixteen units of upper-division geography course work.
However, no more than eight of these 16 units of upper-division elective course work can be an area study.

Secondary Field (16 to 17 units):

1. *Choose one of the following:*
 - Geog 100. Introduction to Human Geography (4)
 - Geog 103. Physical Geography (5)
2. Geog 420. Geography of Economic Activity (4)
3. Eight units of upper-division geography course work.
However, only four of these eight units of upper-division elective course work can be an area study.

History (Primary Field 28 units, Secondary Field 16 units)

Primary Field (28 units):

1. Hist 200. United States History to 1877 (4)
or
Eight units chosen from:
 - Hist 350. The American Colonies, 1607-1783 (4)
 - Hist 351. The Evolution of American Democracy, 1783-1840 (4)
 - Hist 354. Civil War and Reconstruction (4)
2. Hist 201. United States History, 1877 to the Present (4)
or
Eight units chosen from:
 - Hist 356. The United States, 1877-1917 (4)
 - Hist 357. The United States, 1917-1945 (4)

- Hist 359. The United States Since 1945 (4)
3. Hist 300. Early Modern Europe, the Renaissance to 1815 (4)
or
Eight units as follows:
 - Hist 402. Renaissance and Reformation (4)
 - Hist 403. The Age of Absolutism and Enlightenment (4)
4. Hist 301. Modern Europe, 1815 to the Present (4)
or
Eight units chosen from:
 - Hist 408. The Development of 20th Century Europe, 1890-1945 (4)
 - Hist 503. Europe Since 1945 (4)
 - Hist 535. Studies in European National History (4)
5. *Four units chosen from:*
 - Hist 320. History of Ancient Greece (4)
 - Hist 321. History of Rome (4)
 - Hist 400. Early Medieval Europe (4)
 - Hist 401. Late Medieval Europe (4)
6. Eight units of upper-division history course work.

Secondary Field (16 units):

Eight units of upper-division history course work and either Group 1 or 2 below:

Group 1:

1. Hist 200. United States History to 1877 (4)
or
Eight units chosen from:
 - Hist 350. The American Colonies, 1607-1783 (4)
 - Hist 351. The Evolution of American Democracy, 1783-1840 (4)
 - Hist 354. Civil War and Reconstruction (4)
2. Hist 201. United States History, 1877 to the Present (4)
or
Eight units chosen from:
 - Hist 356. The United States, 1877-1917 (4)
 - Hist 357. The United States, 1917-1945 (4)
 - Hist 359. The United States Since 1945 (4)

Group 2:

1. Hist 300. Early Modern Europe, the Renaissance to 1815 (4)
or
Eight units as follows:
 - Hist 402. Renaissance and Reformation (4)
 - Hist 403. The Age of Absolutism and Enlightenment (4)
2. Hist 301. Modern Europe, 1815 to the Present (4)
or
Eight units chosen from:
 - Hist 408. The Development of 20th Century Europe, 1890-1945 (4)
 - Hist 503. Europe Since 1945 (4)
 - Hist 535. Studies in European National History (4)

Political Science (Primary Field 28 units, Secondary Field 16 units)

Primary Field (28 units):

1. PSci 100. Introduction to Political Science (4)
2. PSci 203. American Government (4)
3. *Twenty units of upper-division course work with at least four units from each of the following five fields:*
 - American Government and Politics
 - Four units chosen from :*
 - PSci 320. The Legislative Process (4)
 - PSci 326. Political Parties and Interest Groups (4)
 - PSci 428. Formulation of Public Policy (4)
 - PSci 431. The American Presidency (4)

Comparative Government

Four units chosen from:

- PSci 300. Western Political Systems (4)
- PSci 304. Communist Political Systems (4)
- PSci 306. Developing Political Systems (4)

International Relations

Four units chosen from:

- PSci 325. American Foreign Policy (4)
- PSci 400. International Politics (4)
- PSci 484. National Security Policy (4)
- PSci 500. International Law (4)
- PSci 510. International Organization (4)

Political Theory

Four units chosen from:

- PSci 310. Classical Political Thought (4)
- PSci 311. Foundations of Modern Political Thought (4)
- PSci 313. Contemporary Political Thought (4)

Public Law

Four units chosen from :

- PSci 328. Judicial Process (4)
- PSci 410. American Constitutional Law (4)
- PSci 411. The Bill of Rights (4)

Secondary Field (16 units):

- A. PSci 100. Introduction to Political Science (4)
- B. *Twelve units of upper-division course work, four units chosen from three of the five fields listed below:*

American Government and Politics

Four units chosen from :

- PSci 320. The Legislative Process (4)
- PSci 326. Political Parties and Interest Groups (4)
- PSci 428. Formulation of Public Policy (4)
- PSci 431. The American Presidency (4)

Comparative Government

Four units chosen from:

- PSci 300. Western Political Systems (4)
- PSci 304. Communist Political Systems (4)
- PSci 306. Developing Political Systems (4)

International Relations

Four units chosen from:

- PSci 325. American Foreign Policy (4)
- PSci 400. International Politics (4)
- PSci 484. National Security Policy (4)

- PSci 500. International Law (4)
- PSci 510. International Organization (4)

Political Theory

Four units chosen from:

- PSci 310. Classical Political Thought (4)
- PSci 311. Foundations of Modern Political Thought (4)
- PSci 313. Contemporary Political Thought (4)

Public Law

Four units chosen from :

- PSci 328. Judicial Process (4)
- PSci 410. American Constitutional Law (4)
- PSci 411. The Bill of Rights (4)

Psychology (Primary Field 29 units, Secondary Field 16 units)

Primary Field (29 units):

1. Psyc 100. Introduction to Psychology (4)
2. Psyc 210. Psychological Statistics (5)
3. *Eight units chosen from:*
 - Psyc 201. Developmental Psychology (4)
 - Psyc 382. Psychology of Social Behavior (4)
 - Psyc 385. Personality (4)
 - Psyc 390. Abnormal Psychology (4)
4. *Four units chosen from:*
 - Psyc 360. Cognitive Psychology (4)
 - Psyc 362. Learning and Motivation (4)
 - Psyc 363. Biological Psychology (4)
 - Psyc 364. Perception (4)
5. *Four units chosen from:*
 - Psyc 315. Communication Processes (4)
 - Psyc 318. Health Psychology (4)
 - Psyc 351. Behavior Modification: Principles and Applications (4)
 - Psyc 355. Industrial Psychology (4)
 - Psyc 377. Tests and Measurements (4)
 - Psyc 386. Introduction to Psychotherapy (4)
 - Psyc 387. Community Psychology (4)
 - Psyc 575. Internship in Psychology (4)
6. Four units of upper-division psychology electives.

Secondary Field (16 units):

1. Psyc 100. Introduction to Psychology (4)
2. *Four units chosen from:*
 - Psyc 201. Developmental Psychology (4)
 - Psyc 382. Psychology of Social Behavior (4)
 - Psyc 385. Personality (4)
 - Psyc 390. Abnormal Psychology (4)
3. *Four units chosen from:*
 - Psyc 360. Cognitive Psychology (4)
 - Psyc 362. Learning and Motivation (4)
 - Psyc 363. Biological Psychology (4)
 - Psyc 364. Perception (4)
4. *Four units chosen from:*
 - Psyc 315. Communication Processes (4)
 - Psyc 318. Health Psychology (4)
 - Psyc 351. Behavior Modification: Principles and Applications (4)
 - Psyc 355. Industrial Psychology (4)
 - Psyc 377. Tests and Measurements (4)

- Psyc 386. Introduction to Psychotherapy (4)
 Psyc 387. Community Psychology (4)

Sociology (Primary Field 29 units, Secondary Field 16 units)

Primary Field (29 units):

1. Soc 100. The Study of Society (4)
2. Soc 307. Social Research I (5)
3. *A minimum of four units chosen from:*
 Soc 311. Sociological Theory (5)
 Soc 360. Social Psychology (4)
4. Sixteen units of upper-division sociology electives.

Secondary Field (16 units):

1. Soc 100. The Study of Society (4)
2. Soc 360. Social Psychology (4)
3. Eight units of upper-division sociology electives.

TEACHING CREDENTIAL PROGRAM

Students who wish to be recommended for a single subject teaching credential in social sciences must complete the courses listed below plus a major in one of the following: anthropology, economics, geography, history, political science, psychology, social sciences, or sociology. Coursework taken for majors in these fields, as well as coursework which meets general education requirements, can be applied toward meeting the requirements of the Teaching Credential program. Fulfilling the requirements for this program may necessitate completing more than the minimum 186 units for graduation.

Since the program overlaps with some of the coursework required for the majors in those fields, students must receive advising from a department chair or designee who is knowledgeable about both the major and the credential program. Some of the departments offer special Social Sciences Teaching Credential tracks in their major which include all the coursework necessary. Students who elect to complete the teaching tracks in economics, geography, or history will not need to complete additional coursework from the program which follows.

For information about the professional education component or admission to the teacher education program, contact the School of Education C.A.S.E.-Credentials Office.

Requirements for the Credential in Social Science (93 units plus completion of a major in an approved program)

Lower-division requirements (57 units)

1. Anth 102. Introduction to Anthropology: Culture and Society (4)
2. *Four units chosen from:*
 Anth 140. World Civilizations I, the Rise of Civilization (4)
 Hist 140. World Civilizations I, the Rise of Civilization (4)
3. Econ 104. Economics of Social Issues (4)
4. Econ 200. Principles of Microeconomics (4)

5. Econ 202. Principles of Macroeconomics (4)
6. Geog 103. Physical Geography (5)
7. *Four units chosen from:*
 Geog 100. Introduction to Human Geography (4)
 SSci 165. Regions and Peoples of the World (4)
8. Hist 142. World Civilizations II, the Civilizations of the East and West (4)
9. Hist 144. World Civilizations III, the Expansion of Europe (4)
10. Hist 200. United States History to 1877 (4)
11. Hist 201. United States History, 1877 to the Present (4)
12. PSci 203. American Government (4)
13. Psyc 100. Introduction to Psychology (4)
14. Soc 100. The Study of Society (4)

Upper-division requirements (36 units)

1. Geog 302. Geography of California (4)
2. Hist 370. History of California (4)
3. PSci 330. State and Local Politics (4)
4. *Four units chosen from:*
 Anth 480. Magic, Religion and Science (4)
 Econ 420. Comparative Economic Systems (4)
 Econ 435. Multinational Corporations (4)
 Econ 450. Economic Development (4)
 Geog 380. Population Geography (4)
 Geog 420. Geography of Economic Activity (4)
 Hist 380. History of World Religions (4)
 Hist 589. Revolutions in History (4)
 PSci 400. International Politics (4)
 Soc 380. Sociology of Religion (4)
 Soc 420. Population and Social Ecology (4)
5. *Four units chosen from:*
 Anth 354. Cultures of Mexico and Central America (4)
 Anth 356. Cultures of South America (4)
 Anth 357. African Societies (4)
 Anth 358. Peoples of the Middle East (4)
 Anth 360. Peoples of Australia (4)
 Anth 361. Peoples of Micronesia, Melanesia and Polynesia (4)
 Geog 310. Area Study: Africa (4)
 Geog 321. Area Study: Latin America (4)
 Hist 300. Early Modern Europe, the Renaissance to 1815 (4)
 Hist 301. Modern Europe, 1815 to the Present (4)
 Hist 331. Black History I: The African Experience (4)
 Hist 382. History of the Middle East (4)
 Hist 408. The Development of 20th Century Europe, 1890-1945 (4)
 Hist 410. Hitler's Europe (4)
 Hist 430. China, 1895-Present (4)
 Hist 434. East Asia Since World War II (4)
 Hist 440. Japan, 1868-Present (4)
 Hist 465. Modern Central America (4)
 Hist 470. Modern Latin America (4)
 Hist 503. Europe Since 1945 (4)
 PSci 300. Western Political Systems (4)
 PSci 306. Developing Political Systems (4)

- PSci 308. Government and Politics of the Middle East (4)
- Soc 382. Sociology of Developing Societies (4)
6. *Four units chosen from:*
- Econ 410. Money and Banking (4)
- Econ 421. Economic History of the United States (4)
- Econ 475. Public Finance (4)
- Geog 440. Understanding the City (4)
- Hist 421. Economic History of the United States (4)
- PSci 320. The Legislative Process (4)
- PSci 410. American Constitutional Law (4)
- PSci 411. The Bill of Rights (4)
- PSci 431. The American Presidency (4)
- Soc 318. Social Welfare Policies and Services (4)
- Soc 359. Law and Society (4)
7. *Four units chosen from:*
- Hist 334. Black History II: The American Experience (4)
- Hist 350. The American Colonies, 1607-1783 (4)
- Hist 351. The Evolution of American Democracy, 1783-1840 (4)
- Hist 354. Civil War and Reconstruction (4)
- Hist 356. The United States, 1877-1917 (4)
- Hist 357. The United States, 1917-1945 (4)
- Hist 359. The United States Since 1945 (4)
- Hist 391. Chicano History (4)
- Hist 513. Women in U.S. History (4)
- Hist 540. Constitutional History of the United States (4)
- Hist 556. Foreign Relations of the United States (4)
- Hist 565. Ethnic Minorities in American History (4)
- Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
- Hist 567. The Asian-American Experience (4)
8. *Four units chosen from:*
- Econ 352. Economics of Poverty and Discrimination (4)
- Geog 415. Urban Planning and Land Development (4)
- PSci 326. Political Parties and Interest Groups (4)
- PSci 450. Political Socialization (4)
- Soc 364. Public Opinion and Propaganda (4)
- Soc 432. Political Sociology (4)
9. *A minimum of four units chosen from:*
- Econ 310. Economics in the Classroom (4)
- Econ 335. Economic Analysis with Microcomputers (5)
- Hist 490. The Study of History (4)
- Hist 509. United States History in the Classroom (4)
- Psc 358. Cognitive Development (4)

COURSE OFFERINGS IN SOCIAL SCIENCES (SSci)

Many of the courses listed below are offered as part of the university's general education program. Some are offered in support of other degree programs.

Lower Division

155. Minority Groups in America

Black, Mexican-American and other minority groups as approached from the perspectives of history and the social sciences. (4 units)

160. Contemporary Civilization: Values and Behavior

Interpretation of contemporary society in the light of the knowledge and theories of sociology, anthropology and psychology. (4 units)

165. Regions and Peoples of the World

Survey of major regions of the world using general physical and cultural concepts to explain patterns and problems of human activities in relation to natural environments. (4 units)

215. Statistics for the Social Sciences

Introduction to statistical methods as applied to the social and behavioral sciences. Includes both descriptive and inferential statistics. A self-paced independent study course. Credit may not be received for more than one of the following courses: Management Science 210, Psychology 210, or Social Sciences 215. *Prerequisite: Mathematics 110 or equivalent competency.* (4 units)

Upper Division

300. Nonwestern World

Historical, political, social, geographic and economic aspects of nonwestern societies. *Prerequisite: junior or senior standing.* (4 units)

304. Contemporary Latin America

Social, economic and political conditions and institutions in contemporary Latin America. *Prerequisite: junior or senior standing.* (4 units)

315. Cultural Adaptation: The Quest for Survival

An interdisciplinary inquiry into diverse cultural solutions to universal human problems. Topics include alternative cultural provisions for satisfying economic, social, political and religious needs. *Prerequisite: junior or senior standing.* (4 units)

316. Race and Racism

An interdisciplinary and cross-cultural examination of the concepts of race, ethnic group, prejudice and racism which includes studies of changing prejudiced attitudes. *Prerequisite: junior or senior standing.* (4 units)

320. Understanding Capitalism

Exploration into the origins and nature of capitalism. Focus on the historical development and contemporary structure of the social, political and economic institutions of capitalism. *Prerequisite: junior or senior standing.* (4 units)

321. Urbanization and the Urban Environment

Patterns and processes of urban growth. Major emphasis on reasons for growth of cities; economic, social, political and structural changes in urban areas which accompany urbanization; and a cross-cultural analysis of urban problems. *Prerequisite: junior or senior standing.* (4 units)

325. Perspectives on Gender

This interdisciplinary course uses scientific, humanistic, and social science perspectives to foster an understanding of how gender roles in Western culture are established, maintained and changed. (Also offered as Humanities 325 and Natural Sciences 325. Students may receive credit for only one of these courses.) *Prerequisite: junior or senior standing.* (4 units)

333. Sanity and Civilization

Effects of the social, political and economic institutions of past and contemporary civilizations on definitions of sanity and insanity, and the impact of such definitions on the quality of life. (4 units)

343. Understanding Socialism

Description and analysis of socialism: social, economic, political and historical issues. *Prerequisite: junior or senior standing.* (4 units)

345. Religious Expression in America

Interdisciplinary social science analysis of the relationship among religious belief religious practices and secular society in American culture. *Prerequisite: junior or senior standing.* (4 units)

350. Roots of Modern Racism in America

An interdisciplinary exploration of the roots of modern racism in America in the decades following the Civil War. The course will focus on the experiences of ethnic men and women and on the concurrent anti-Semitic, anti-Catholic and Americanization movements. The course will focus on the dynamics of these intergroup relations and their legacy for contemporary America. *Prerequisite: junior or senior standing.* (4 units)

495. Expository Writing for the Social Sciences

Writing related to the social sciences including documented research reports, summaries and analytical papers. Revision and rewriting will be required. Course fulfills the graduation requirement in writing proficiency. No more than one of the expository writing courses (Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, Social Sciences 495) may be taken for credit. Students who have received a grade of no credit in any combination of the expository writing courses two or more times must meet with the 495 coordinator or designee to design a developmental writing plan as a condition for enrolling for a third quarter. All students must obtain junior status at the time of registration or their course request will be cancelled. Graded A, B, C/ No credit. *Prerequisites: English 101 and a minimum of 90 quarter (60 semester) units of college credit.* (4 units)

SOCIOLOGY

Department of Sociology

Faculty Office Building, Room 123
880-5541

Bachelor of Arts

Sociology
Sociology - Social Work Program

Minor

Sociology

Certificate Programs

Gerontology
Social Work

FACULTY: David Decker (Chair), Patricia Domingues, John Heeren, Mary Beth Kelsey, Tom Meisenhelder, Randi Miller, Cliff Paynton (Emeritus), Mary Teixeira, Elsa Valdez

The sociology major offers a balanced program of study for students interested in pursuing graduate study or in the practical application of sociology. The curriculum is designed to expose the student to the scope and methods of sociology and to provide a broad educational background for understanding the structure and functioning of modern society.

The department also offers an alternate program of study for students interested in pursuing a career in social work and for those interested in enrolling in an M.S.W. graduate program.

As an adjunct to the curriculum, there are two student organizations for sociology majors. The Sociology Club has a varied program of social, community service and academically oriented activities. In addition to general sociology majors, students in human services and students in social work actively participate in the club. A chapter of Alpha Kappa Delta, the sociology honor society, is open to junior sociology majors with a 3.5 GPA and to seniors and graduate students with a 3.0 GPA.

B.A. IN SOCIOLOGY

Requirements (63 units)

Requirements for the B.A. in Sociology:

1. Soc 100. The Study of Society (4)
2. Soc 301. Applications in Sociology (4)
3. Soc 307. Social Research I (5)
4. Soc 309. Social Research II (5)
5. Soc 311. Sociological Theory (5)
6. Soc 590. Seminar in Sociology (4)
7. Thirty-six additional units in sociology, 32 of which must be upper-division.

Coursework in the major should be taken in proper sequence. The curriculum has been designed to emphasize the acquisition of cumulative competencies by having students complete foundation courses that give them the

skills, frameworks and knowledge that can be utilized in higher-level courses. Students should consult their advisor for the correct sequence of courses.

SOCIAL WORK PROGRAM

Requirements (63 units)

Requirements for the B.A. in Sociology—Social Work Program:

1. Soc 100. The Study of Society (4)
2. Soc 301. Applications in Sociology (4)
3. Soc 307. Social Research I (5)
4. Soc 309. Social Research II (5)
4. Soc 311. Sociological Theory (5)
5. Soc 318. Social Welfare Policies and Services (4)
6. Soc 434. Community Organization (4)
7. Soc 436. Group Dynamics (4)
8. Soc 484. Social Casework (4)
9. Soc 590. Seminar in Sociology (4)
10. Twenty units in upper-division sociology courses.

MINOR IN SOCIOLOGY

Requirements (28 units)

Requirements for a minor in Sociology:

Twenty-eight units in sociology course work chosen with the consent of a departmental advisor. Eight of these units may be at the lower-division level.

DEPARTMENTAL HONORS

Students majoring in sociology are eligible to receive honors in sociology at graduation if they have met the following:

1. A 3.5 GPA in all sociology courses attempted;
2. At least half of all work attempted in sociology completed at this university;
3. Recommendation for departmental honors by the sociology faculty.

It is strongly recommended that students qualifying for departmental honors register for:

Soc 597. Senior Honors Project.

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Gerontology

Certificate Requirements (28 units)

1. HSci 423. Health and Wellness of Older Adults (4)
or
Nurs 454. Anatomical/Physiological Processes of Aging (4)
2. Psyc 329. Psychology of Adulthood and Aging (4)
3. Soc 330. Social Gerontology (4)
4. *A minimum of sixteen units of elective courses, chosen with the approval of an advisor from Groups A and B below: (No more than six units in independent study or field study may be applied toward completion of the certificate.)*
 - A. Natural Sciences electives:
 - Biol 223. Human Physiology and Anatomy I (5)
 - Biol 306. Human Heredity and Development (4)
 - Biol 314. Biology of Human Sexuality (4)
 - May choose only one of the following:*
 - HSci 345. Food Science (5)
 - HSci 362. Principles of Nutrition (4)
 - HSci 371. Community Health Services (4)
 - HSci 440. Family Health Issue for Educators (2)
 - HSci 452. Special Topics in Health Science and Human Ecology: Death and Dying (4)
 - HSci 492A. Field Study: Action/Research in Human Ecology and Health (5)
 - HSci 492B. Field Study: Action/Research in Human Ecology and Health (5)
 - HSci 595. Independent Study (2-4)
 - Nurs 455. Chronic Diseases of the Aging Population (4)
 - Nurs 456. Adaptation to Chronic Illness (4)
 - Nurs 457. Health Services for the Non-Institutionalized Aging Person (2)
 - Nurs 595. Independent Study (1-6)
 - B. Social Sciences electives:
 - Anth 331. Anthropology of Human Development (4)
 - Psyc 575. Internship in Psychology (4)
 - Psyc 595. Independent Study (2-4)
 - Soc 434. Community Organization (4)
 - Soc 575. Internship in Sociology and Social Work (5)
 - Soc 590. Seminar in Sociology: Aging (4)
 - Soc 595. Independent Study (2-5)

Certificate in Social Work

Certificate Requirements (34 units)

1. Soc 100. The Study of Society (4)
2. Soc 318. Social Welfare Policies and Services (4)
3. Soc 339. Socialization (4)
4. Soc 434. Community Organization (4)
5. Soc 436. Group Dynamics (4)
6. Soc 484. Social Casework (4)
7. Soc 575. Internship in Sociology and Social Work (5) for a total of (10)

Note: Internship will be waived for those having one year of social work experience in a social agency.

COURSE OFFERINGS IN SOCIOLOGY (Soc)

Lower Division

100. The Study of Society

Survey of the basic characteristics and dynamics of society and culture from the sociological perspective. (CAN SOC 2) (4 units)

103. Critical Issues in Criminal Justice

Contemporary problem areas in the criminal justice system, including issues in evidence, arrest and detention, search and seizure, the ideology of crime control and criminal justice reform and specific areas of crime (organized crime, political crime). May not be taken for credit by students who have received credit for Criminal Justice 103. (4 units)

110. Choices in the Life Course

Utilization of social research in helping students make choices about life course events, such as career, education and family. (2 units)

180. Critical Thinking about Social Problems

Critical thinking skills are developed through a comparison of common sense and social scientific analyses of contemporary social problems. Focus on causal reasoning, common logical fallacies and the distinction between belief and knowledge. (4 units)

200. Social Problems

Social problems in modern industrial societies. Discussion of sociological research and theoretical propositions dealing with such problems as drug addiction, mental illness, war, abortion and sexual perversions. (CAN SOC 4) (4 units)

Upper Division

Prerequisite for upper-division courses is Sociology 100, or consent of instructor.

301. Applications in Sociology

Intensive look at sociological research, stressing the application of theory and methods in specific empirical studies. (4 units)

307. Social Research I

Basic concepts and techniques used by sociologists in conducting research. Four hours lecture and two hours laboratory. Formerly Sociology 308. *Prerequisites: Sociology 100 and 180 (or other course that meets the Critical Thinking requirement of the general education program).* (5 units)

309. Social Research II

Application of social measurement techniques, including data collection, data entry and the use and interpretation of the methods of data presentation with the utilization of statistical routines. Involves the use of computers and statistical software in the development of research reports, sociological analysis and modeling. Four hours lecture and two hours laboratory. Formerly Sociology 308. *Prerequisites: Sociology 307 and Mathematics 110, 115 or 120.* (5 units)

311. Sociological Theory

Sources of sociological theory and current trends in sociological analysis. Four hours lecture and two hours laboratory. (5 units)

318. Social Welfare Policies and Services

Survey and analysis of welfare as a complex of societally established income maintenance and social service programs. (4 units)

320. The Sociology of Child Abuse

The occurrence, causes and effects of child abuse as a social phenomenon. (4 units)

322. Sociology of the Ghetto

Existing theories relating to ghetto life styles; the relationship of these to American society as a whole. (4 units)

330. Social Gerontology

Age-status and age-roles in American society, with cross-cultural comparisons including intergenerational conflict and other age-related behaviors. (4 units)

335. Images of Birth and Death

Historical and contemporary beliefs and attitudes about birth and death and the impact of these attitudes on society, from a variety of perspectives with a special focus on feminist analysis. (4 units)

336. Black Women and Feminism

Black women in America and their activities on behalf of women's rights; the interplay of racism and sexism within the women's movement. (4 units)

339. Socialization

Theories, goals and processes of childhood socialization and, to a lesser extent, adult socialization. Emphasis on organized social roles as they are mediated through the norms and patterned interactions of institutions; that is, the family, peer groups and the schools. (4 units)

340. Sociology of the Family

A systematic and comparative analysis of family structure and change: marriage, reproduction, childrearing, marital problems. (4 units)

341. Marriage and Family Among Blacks

Forces affecting the black family, with emphasis on the roles assigned to individual members. (4 units)

342. The Chicano Family

Consideration of the traditional and changing Mexican-American family patterns. Regional and social class variations. Influence of the family on Mexican-American personality development from a social-psychological perspective. (4 units)

344. Sex Roles: The Life Cycle

An examination of the social roles of men and women in contemporary American society from a life-cycle perspective. Class and racial/ethnic variations in sex-role socialization are emphasized. (4 units)

350. Criminology

Causes of crime with emphasis on sociological factors. (4 units)

352. Juvenile Offender

Causes of juvenile delinquency, types of juvenile offenders, the juvenile court, legal aspects of delinquency and methods of rehabilitation. (4 units)

354. Deviant Behavior

Deviant modes of human adjustment to modern society; processes of personal-social interaction in development of individual and group deviation. (4 units)

355. Medical Sociology

Patient's self concept from the pre-patient stage to the post-patient state and the relationship to the social system. Developmental stages in the "sick role" in contemporary society are emphasized. (4 units)

356. Sociology of Mental Illness

Cultural variations in definitions of mental health and illness; social processes involved in defining, labeling and treating mental illness; stigmatizing effects of being labeled mentally ill; relationship of the incidence and treatment of mental illness to class, ethnicity and other sociological categories. (4 units)

357. Law Enforcement

Sociological analysis of law enforcement systems and the police role, consideration of police discretion and differential implementation of the criminal law, problems affecting crime control and the interdependence of police and community. May not be taken for credit by students who have received credit for Criminal Justice 340 (357 or 357A). (4 units)

358. Punishment and Corrections

History and theories of punishment and treatment in dealing with criminals, sociological analysis of institutional systems and community based systems, work release programs and pre-release guidance centers. May not be taken for credit by students who have received credit for Criminal Justice 330 (or 358). (4 units)

359. Law and Society

Social and cultural factors underlying the development, maintenance and change of law, legal structures and legal processes; comparative analysis of legal systems; and sociological consideration of the nature of justice. May not be taken for credit by students who have received credit for Criminal Justice 370 (or 359). (4 units)

360. Social Psychology

The study of social interaction as it influences the development of self, role behavior, attitudes and values. Emphasis on symbolic interaction as a school of thought. (4 units)

363. Sociology of Mass Communication

Study of symbolic and organizational aspects of mass communication systems. Special attention to attitudes and beliefs as influenced by the mass media. (4 units)

364. Public Opinion and Propaganda

Nature and bases of public opinion; the social context of propaganda, its bases, its social psychological functions and the techniques of propagandists. (4 units)

368. Sociology of Work and the Professions

Development of occupational roles, with emphasis on specialization and mobility; impact of occupations on social institutions; special focus on the development of the professions. (4 units)

369. Military Sociology

Interrelationships between the civilian and military sector.

A. Comparative Military Sociology (Also offered as Military Science 369A. Students may not receive credit for both.) (2 units)

B. American Military Sociology (Also offered as Military Science 369B. Students may not receive credit for both.) (2 units)

370. Sociology of Popular Culture

Sociological study of leisure and popular culture, including sports and mass media. Analysis of the relationships among popular culture, social structure and social change. (4 units)

375. Sociology of Sport

A sociological study of the relationship of sport to the structure of human societies. Analysis of the role of sport in childhood and adult socialization, and in the defining of social groups, neighborhoods, schools, cities, regions and nations. (4 units)

380. Sociology of Religion

Theoretical analysis of religion as a social institution in complex societies. Structure and functioning of religious organizations, roles and role relationships; types of religious organizations and leadership; relationships of religion to other social institutions; religion and social change. (4 units)

382. Sociology of Developing Societies

Examination of the causes and consequences of the "development of under-development" in the contemporary world-system. (4 units)

388. Special Comprehensive Examination in Sociology Core Curriculum

Independent study, without required classroom meetings, of the subject matter appropriate to three courses required for the major: Sociology 311 and 360. *Prerequisite: consent of instructor.* Refer to Page 48 for comprehensive examination limitations. (12 units)

410. Racial and Cultural Minorities

Minority group status in contemporary American society. (4 units)

420. Population and Social Ecology

Social causes and consequences of population growth, decline and relocation. (4 units)

430. Urban Sociology

Nature, causes and consequences of urbanization; metropolitan areas; location and types of cities; social and demographic characteristics of urban populations. (4 units)

432. Political Sociology

Examination of political process from the perspective of sociology, exploring in depth the nature, distribution and exercise of power, and related areas of interest. (4 units)

434. Community Organization

Programs of action, operative and proposed, for the organization of the community and the solution of its problems. (4 units)

436. Group Dynamics

Dynamics of primary group relationships, including psychotherapy groups. (4 units)

438. Industrial Sociology

Human relations in industry, both formal and informal, with special attention to problems of morale, productivity, decision-making and bureaucratic structure. (4 units)

440. Power and Privilege

Class, caste and other systems of social stratification with particular reference to the United States. (4 units)

441. Black Social Stratification

Caste in America, comparison of black and white stratification, black social mobility. (4 units)

442. Chicano Social Stratification

Variables affecting the social status of the Mexican-American in society, Mexican-American social mobility, social class differences in Mexican-American communities. (4 units)

450. White Collar Crime

Study of America's most costly form of crime and deviance. History, causes, consequences, prevention and explanations of economic crime and abuse of power in the corporate and business world, the professions, trades, the unions and government. May not be taken for credit by students who have received credit for Criminal Justice 450 or 452. (4 units)

473. Interviewing in Social Work

Basic interviewing methodology and techniques utilized by social workers in communicating with people who are experiencing adjustment problems. (4 units)

484. Social Casework

Process of problem solving used by social work agencies to help individuals to cope more effectively with their problems in social functioning. (4 units)

488. Special Comprehensive Examination in Sociology Electives

Independent study, without required classroom meetings, of the subject matter appropriate to these three elective courses: Sociology 363, 364 and 370. *Prerequisite: consent of instructor.* Refer to Page 48 for comprehensive examination limitations. (12 units)

540. Sociology of Education

Sociological analysis of educational organizations, the relationship of such organizations to culture, social class and power, and the roles of teachers, students and administrators. (4 units)

575. Internship in Sociology and Social Work

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit.

Prerequisites: consent of instructor and department. (5 units)

590. Seminar in Sociology

An intensive study of some phase of sociology to be developed by the instructor with the class. May be repeated for credit as topics change. *Prerequisite: consent of instructor. (4 units)*

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in Sociology 595 may be applied toward graduation. *Prerequisites: senior or graduate standing, a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken. (Credit to be arranged: 2 to 5 units)*

597. Senior Honors Project

Original research in an area of sociology, culminating in a major research report. The research project may be a quantitative or qualitative nature. Enrollment limited to students whose formal application for departmental honors is approved. *Prerequisite: formal application approved by department chair. (5 units)*

Graduate/Postbaccalaureate

May not be taken by undergraduate students

606. Sociology of Terrorism

Ideology, causes, development and sociological effects of terrorism in society. Also included are the histories of terrorist groups, social-psychological profiles of members, technology and modus operandi. (4 units)

SPANISH

Department of Foreign Languages

University Hall, Room 314
880-5847

Bachelor of Arts

Spanish
Literature Track
Language Track
Business Track

Teaching Credential Program

Spanish

Minor

Spanish

Certificate Programs

Bilingual/Cross-Cultural Studies: Spanish/ English
Spanish for Public Services

The study of Spanish at California State University, San Bernardino is based on the recognition that the Hispanic culture in the United States forms an integral part of American society, and that the Spanish language, far from being "foreign," is spoken in nearly all sections of our nation alongside of English. In some areas of Southern California as well as other parts of the United States, speakers of Spanish outnumber those who speak English. Moreover, the importance of the Hispanic culture in the United States is increasing daily as additional immigrants arrive from Latin America.

The knowledge of Spanish for those seeking employment in our region is critical for the fields of teaching, journalism, publishing, advertising, writing, business, law, law enforcement, government, health services, as well as other career opportunities. Even a basic knowledge of Spanish at the Spanish 102 level may increase the probability of employment for these and other fields.

For the non-major of Spanish, the Spanish faculty of the Department of Foreign Languages recommends that the student fulfill the general education requirement in the foreign language section by one of the following:

- Span 102. College Spanish II (if the student had less than two years of high school Spanish)
- Span 150. Intermediate Spanish (for those who had two years of high school Spanish)
- Span 155. Intermediate Spanish for Spanish Speakers (for those who have learned Spanish at home or while traveling)

For those advanced students of Spanish, one of the following courses would be an appropriate course to satisfy the general education requirement:

- Span 212. Composition
- Span 214. Conversation
- Span 216. Introduction to Literary Texts

Additional opportunities for the non-major of Spanish are also available. The Certificate in Spanish for Public Services provides critical skills in Spanish in the areas of speaking, translating and communication. The Certificate in

Bilingual/Cross-Cultural Studies: Spanish/English familiarizes the student with the Hispanic culture in and outside of the United States. The Liberal Studies degree, for those prospective teachers of elementary children K-6, can be enhanced by taking the Bilingual Cross-Cultural Emphasis. This track allows the student to teach in both English and bilingual classrooms. The minor in Spanish, which can be combined with any non-Spanish major, gives the student additional experience in Hispanic culture, literature and linguistics. A double major of Spanish and another subject is also an option.

For the Spanish major, the study of all aspects of Hispanic civilization is available, in both lower and upper-division classes. Those desiring to teach Spanish at the high school level as well as all other students in the program will receive a solid preparation in the culture and language of Spain and Latin America, as well as the Hispanic community within the United States.

B.A. IN SPANISH

Requirements (Literature and Language Tracks-70 units; Business Track-78 units)

Requirements for the B.A. in Spanish:

Core requirements (45 units)

1. Proficiency in Spanish equal to that of Spanish 150. Intermediate Spanish. All students intending to major in Spanish must take a proficiency examination given during the first two weeks of class. Contact the Department of Foreign Languages for more information. Students who need additional work in Spanish may be required to take Spanish 200. Spanish Workshop. Spanish 200 does not count for the major.
2. *Four units chosen from:*
 - Span 212. Composition (4)
 - Span 213. Composition for Native Speakers (4)
 - Span 214. Conversation (4)
 - Span 216. Introduction to Literary Texts (4)
 - Span 302. Theory and Practice in Composition (4)
 - Span 320. Special Problems in Spanish Grammar (4)
 - Span 371. Cultural and Intellectual Foundations of Hispanic Civilization (4)
 - Span 394. Practicum (2) for a total of (4)
 - Span 395. Junior Assessment (1)
 - Span 402. Advanced Composition (4)
 - Span 410. Spanish Peninsular Civilization (4)
 - Span 412. Latin American Civilization (4)
 - Span 415. Comparative Linguistics: Spanish/English (4)

Literature Track (25 units)

1. Span 372. Modern Peninsular Literature (4)
2. Span 373. Modern Latin American Literature (4)
3. *Four units chosen from:*
 - Span 400. Masterpieces in Spanish and Spanish American Literature (4)
 - Span 440. Mexican Literature (4)
 - Span 435. Chicano Literature (4)

4. Span 514. Seminar in Hispanic Language, Literature or Film (4)
5. Spanish language elective
Four units chosen from :
 - Span 312A. Techniques for Professional Interpreting and Translating in Spanish: Literature (4)
 - Span 312B. Techniques for Professional Interpreting and Translating in Spanish: Public Services (4)
 - Span 312C. Techniques for Professional Interpreting and Translating in Spanish: Law (4)
 - Span 314. Advanced Conversation (4)
 - Span 316A. Spanish for the Professions: Communications (4)
 - Span 316B. Spanish for the Professions: Health Science (4)
 - Span 316C. Spanish for the Professions: Education (4)
 - Span 316D. Spanish for the Professions: Business (4)
 - Span 316E. Spanish for the Professions: Law Enforcement (4)
 - Span 401. Phonetics (4)
6. Elective in any upper-division Spanish course (4)
(Spanish 430. Creative Writing is highly recommended.)
7. Span 496. Senior Assessment (1)

Language Track (25 units)

1. *Eight units chosen from:*
 - Span 312A. Techniques for Professional Interpreting and Translating in Spanish: Literature (4)
 - Span 312B. Techniques for Professional Interpreting and Translating in Spanish: Public Services (4)
 - Span 312C. Techniques for Professional Interpreting and Translating in Spanish: Law (4)
 - Span 314. Advanced Conversation (4)
 - Span 316A. Spanish for the Professions: Communications (4)
 - Span 316B. Spanish for the Professions: Health Science (4)
 - Span 316C. Spanish for the Professions: Education (4)
 - Span 316D. Spanish for the Professions: Business (4)
 - Span 316E. Spanish for the Professions: Law Enforcement (4)
2. Span 401. Phonetics (4)
3. Span 514. Seminar in Hispanic Language, Literature or Film (4)
4. Four units chosen from Spanish literature elective.
5. Four units elective in any upper-division Spanish course.
(Spanish 575. Internship in Service Learning is highly recommended.)
6. Span 496. Senior Assessment (1)

Business Track (33 units)

1. Acct 211. Principles of Accounting I (4)
2. Info 101. Introduction to Information Technology (4)
3. Mgmt 302. Management and Organizational Behavior (4)
4. Mktg. 305. Marketing Principles (4)
5. Span 312B. Techniques for Professional Interpreting and Translating in Spanish: Public Services (4)

6. Span 316D. Spanish for the Professions: Business (4)
7. Span 496. Senior Assessment (1)
8. Eight upper-division units chosen from a specific area in information management, accounting, management or marketing.

TEACHING CREDENTIAL PROGRAM

The Bachelor of Arts in Spanish is approved as a single subject teaching credential program. In addition to the requirements of the major, credential candidates must complete certain prerequisites to the teacher education program. For information about the professional education component, admission to the teacher education program or specific requirements of the single subject waiver program, see Page 146 or contact the School of Education C.A.S.E.-Student Teaching Office.

MINOR IN SPANISH

Requirements (28 units)

Requirements for a minor in Spanish:

Proficiency in Spanish equal to Spanish 150. Intermediate Spanish.

Note: Entering students with previous training in Spanish, and those who are native speakers, should contact the Department of Foreign Languages for information about advanced placement and credit by examination.

Twenty-eight additional units in Spanish courses, 20 units of which must be upper-division.

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Bilingual/Cross-Cultural Studies: Spanish/English

Certificate Requirements (32 units)

Lower-division requirements (8 units)

1. Span 212. Composition (4)
2. Span 216. Introduction to Literary Texts (4)

Upper-division requirements (24 units)

1. Comm 304. Intercultural Communication (4)
2. *Eight units chosen from:*
 - Art 328. Mexican Art (4)
 - Art 329. Chicano Art (4)
 - Span 400. Masterpieces in Spanish and Spanish American Literature (4)
 - Span 415. Comparative Linguistics: Spanish/English (4)
 - Span 440. Mexican Literature (4)
 - Span 514. Seminar in Hispanic Language, Literature or Film (4)
3. *Twelve units chosen from:*
 - Anth 354. Cultures of Mexico and Central America (4)
 - Anth 356. Cultures of South America (4)
 - Anth 460. Language and Culture (4)
 - Hist 390. History of Modern Mexico (4)
 - Hist 391. Chicano History (4)
 - Hist 470. Modern Latin America (4)
 - IS 460. Aspects of Chicano Culture (4)

Certificate in Spanish for Public Services*Certificate requirements (28 units)*

Proficiency in Spanish equal to Spanish 150. Intermediate Spanish or equivalent. **Note:** Entering students with previous training in Spanish, and those who are native speakers, should contact the Department of Foreign Languages for information about advanced placement and credit by examination.

Lower-division requirement (4 units)

1. Span 212. Composition (4)

Upper-division requirements (24 units)

1. Span 302. Theory and Practice in Composition (4)
2. Span 312. Techniques for Professional Interpreting and Translating in Spanish (4)
3. Span 314. Advanced Conversation (4)
4. Span 316. Spanish for the Professions (4)
5. Span 400. Masterpieces in Spanish and Spanish American Literature (4)
6. Span 415. Comparative Linguistics: Spanish/English (4)

COURSE OFFERINGS IN SPANISH (Span)

Lower Division

Courses at the 101, 102 and 150 levels require one hour each week in the language laboratory in addition to the regularly scheduled classroom hours.

Students who have completed one or more Spanish upper-division courses may not enroll in lower-division courses without the approval of the Department of Foreign Languages.

101. College Spanish I

Fundamentals of pronunciation, structure and Hispanic culture designed to develop the ability to use and understand basic spoken Spanish. Students who have not taken Spanish at California State University, San Bernardino, must take a placement test before registration. Contact department office for details. (4 units)

102. College Spanish II

Further study of the fundamentals of pronunciation, structure and Hispanic culture designed to develop the ability to use and understand basic spoken Spanish. Continuation of Spanish 101. Students who have not taken Spanish at California State University, San Bernardino, must take a placement test before registration. Contact department office for details. (4 units)

150. Intermediate Spanish

Emphasis on oral and written competency at the intermediate level in a cultural context. Students who have not taken Spanish at California State University, San Bernardino, must take a placement test before registration. Contact department office for details. *Prerequisite:* two years of high school Spanish or equivalent. (4 units)

155. Intermediate Spanish for Spanish Speakers

Emphasis on reading comprehension, vocabulary building, and writing at the intermediate level in a cultural context. Students may not receive credit for both Spanish 150 and 155. Students who have not taken Spanish at California State University, San Bernardino, must take a placement test before registration. Contact department office for details. *Prerequisite:* ability to speak Spanish. (4 units)

200. Spanish Workshop

An intermediate-level refresher course in the four language skills: oral comprehension, speaking, reading, and writing. Designed to prepare students for the required courses in the core requirements. May not be counted toward fulfilling requirements in the Spanish major or minor. May be repeated for credit, but only four units may be counted toward graduation. *Prerequisites:* Spanish 150 or the equivalent and consent of Spanish coordinator. (4 units)

212. Composition

Comprehensive review of the principles of Spanish grammar, emphasizing their application to composition. Formerly Spanish 202. *Prerequisite:* Spanish 150 or equivalent. (4 units)

213. Composition for Spanish Speakers

Comprehensive review of the principles of Spanish grammar, emphasizing their application to composition. *Prerequisite:* Spanish 155 or equivalent. (4 units)

214. Conversation

Practice of oral Spanish stressing the discussion of current topics, panel discussions, debates, short talks and skits. *Prerequisite:* Spanish 150 or equivalent. (4 units)

216. Introduction to Literary Texts

Techniques of literary study and analysis. Vocabulary development. Formerly Spanish 204. *Prerequisite:* Spanish 150 or equivalent. (4 units)

290. Spanish and Latin American Literature in English

Introduction to Hispanic literature read in English translation. (4 units)

Upper Division

Ordinarily, upper-division courses are conducted in Spanish. Students enrolled in these courses will be evaluated on appropriate progress in both the command of the language and the subject matter.

302. Theory and Practice in Composition

Extensive practice in composition and style. *Corequisite: must be taken concurrently with Spanish 395.* If student fails to receive credit for Spanish 395, both Spanish 302 and 395 must be repeated. May be repeated once for credit after having passed Spanish 395. *Prerequisite: Spanish 212, 213 or 216.* (4 units)

312. Techniques for Professional Interpreting and Translating in Spanish

Oral and written practice and methods of translation from Spanish to English and English to Spanish. May be repeated as topics change. *Prerequisites: Spanish 302 and 395.*

- A. Literature (4 units)
- B. Public Services (4 units)
- C. Law (4 units)

314 Advanced Conversation

Intensive practice of oral Spanish leading to fluency, to the development of a comprehensive, practical vocabulary and to public speaking skills. *Prerequisites: Spanish 214 and 395.* (4 units)

316. Spanish for the Professions

Oral and written practice in terminology used in various professions. May be repeated as topics change. *Prerequisites: Spanish 302 and 395.*

- A. Communications (4 units)
- B. Health Science (4 units)
- C. Education (4 units)
- D. Business (4 units)
- E. Law Enforcement (4 units)

320. Special Problems in Spanish Grammar

Intensive study of selected grammatical problems in Spanish. Three hours lecture and two hours laboratory. *Prerequisites: Spanish 212, 302 and 395.* (4 units)

371. Cultural and Intellectual Foundations of Hispanic Civilization

Traces the development of Spanish civilization from its roots in the Roman Empire through the period of its overseas expansion to Latin America during the 16th, 17th, and 18th centuries. *Prerequisites: Spanish 216, 302 and 395.* (4 units)

372. Modern Peninsular Literature

Readings in Spanish peninsular literature of the 18th, 19th and 20th centuries. *Prerequisites: Spanish 216, 302 and 395.* (4 units)

373. Modern Latin American Literature

Readings in Latin American literature of the 18th, 19th and 20th centuries. Formerly Spanish 392. *Prerequisites: Spanish 216, 302 and 395.* (4 units)

394. Practicum

Participation in departmental cultural activities. May be repeated for a total of 4 units. Generally assumes 30 hours of work/study per unit of credit. Graded credit/no credit. *Prerequisites: Spanish 213, 302 and 395.*

- A. Dramatic Production (2 units)
- B. Student/Faculty Journal (2 units)
- C. Tutoring Center (2 units)
- D. Media Center Service (2 units)
- E. Community Outreach (2 units)

395. Junior Assessment

Oral and written assessment of an independent study project. *Corequisite: must be taken concurrently with Spanish 302.* Satisfactory completion will be required for enrollment in all other upper-division courses in Spanish (excluding Spanish 435). If student fails to receive credit for Spanish 395, both Spanish 302 and Spanish 395 must be repeated. A student who fails Spanish 395 twice will not be permitted to participate in the Spanish major, minor, certificate programs, or upper-division classes required in the Cross-Cultural Bilingual Liberal Studies program. (1 unit)

399. Community Service Project

Credit for performing academically related tasks in such agencies as governmental, social service and educational institutions. May be repeated for a total of six units. No more than six units of credit for Community Service Project courses may be applied toward degree requirements. Graded credit/no credit. *Prerequisites: Spanish 395 and consent of department.* (Credit to be arranged: 1 or 2 units)

400. Masterpieces in Spanish and Spanish American Literature

Reading and discussion of selected masterworks of Spanish and Spanish American literature. May be repeated for credit as topics change. *Prerequisites: Spanish 216, 302 and 395.* (4 units)

401. Phonetics

In depth study of the Spanish sound system. Oral practice and study of general principles of Spanish phonology and dialectology. Three hours lecture and two hours laboratory. *Prerequisites: Spanish 302 and 395.* (4 units)

402. Advanced Composition

Advanced expository writing in Spanish, including documented research reports and analytical papers. Revision and rewriting will be required. May be repeated for credit. *Prerequisites: Spanish 302 with a grade of "C" or better and 395.* (4 units)

410. Spanish Peninsular Civilization

Analysis of significant cultural aspects of Spanish civilization. *Prerequisites: Spanish 302 and 395.* (4 units)

412. Latin American Civilization

Analysis of significant cultural aspects of Latin American civilization. *Prerequisites: Spanish 302 and 395.* (4 units)

415. Comparative Linguistics: Spanish/English

Application of modern linguistic theory to the problems of second language acquisition in the areas of phonology, morphology and syntax. Emphasis will be given to analysis of the subsystems of English and Spanish. Includes classroom applications. *Prerequisites: Spanish 302 and 395.* (4 units)

430. Creative Writing

Workshop in writing fiction and poetry, discussion of student writings, and exemplary works by established authors. *Prerequisites: Spanish 302, 395 and 402.* (4 units)

435. Chicano Literature in Spanish

Literary analysis of selected works by Chicano writers with a special emphasis on historical and contemporary issues. *Prerequisite: ability to read and write at the Spanish 150 or 155 level.* (4 units)

440. Mexican Literature

Survey of the development of Mexican literature from 1520 to the present. *Prerequisites: Spanish 216, 302 and 395.* (4 units)

496. Senior Assessment

Creation and submission of a portfolio assessing and documenting academic progress since the junior assessment. The portfolio will contain evidence gathered exclusively from all core courses. Majors must take this course after completing the core and prior to enrolling in the last twelve units of the major. Graded credit/no credit. *Prerequisite: Spanish 395.* (1 unit)

514. Seminar in Hispanic Language, Literature or Film

Advanced study of a single author, a literary movement, a genre, linguistics or film. May be repeated for credit as topics change. *Prerequisites: Spanish 216, 302 and 395.* (4 units)

575. Internship in Service Learning

Supervised intensive work that requires advanced skills in oral and/or written Spanish in private or public organizations. A total of eight units may be applied toward graduation. Generally assumes thirty hours of work/study per unit of credit. Graded credit/no credit. *Prerequisites: Spanish 302 and 395.* (Credit to be arranged: 2 to 5 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Theory of Rhetoric and Composition

Traditional and contemporary approaches to rhetoric, composition and style. *Prerequisite: admission to the M.A. in Education, Secondary Education (Spanish) Option, or consent of instructor.* (4 units)

601. Practicum in Cultural Experience

Supervised learning experience utilizing Spanish in practical campus and/or community settings with emphasis on leadership development. Generally assumes a minimum of 60 hours of work/study per quarter. *Prerequisite: admission to the M.A. in Education, Secondary Education (Spanish) Option, or consent of instructor.* (2 units)

602. Problems in Applied Linguistics

The study of contemporary theories of linguistic analysis and their applications to literature, film, grammar, and composition. *Prerequisite: admission to the M.A. in Education, Secondary Education (Spanish) Option, or consent of instructor.*

A. Modern Grammar (4 units)

B. Bilingualism (4 units)

C. Discourse Analysis (4 units)

603. Cultural Studies

Analysis of the salient features of modern Latino culture including but not limited to gender, literature, and ethnicity. *Prerequisite: admission to the M.A. in Education, Secondary Education (Spanish) Option, or consent of instructor.* (4 units)

604. Instructional Technology and Design

Survey of audio and computer-based technologies commonly available in language media centers and instruction in the design of courseware, the use of authoring systems, and the design of pedagogical materials. Three hours lecture and two hours laboratory. *Prerequisites: Computer Science 127 or equivalent; and admission to the M.A. in Education, Secondary Education (Spanish) Option, or consent of instructor.* (4 units)

605. History of the Spanish Language

History of the Spanish language from pre-Roman days to the present. *Prerequisite: admission to the M.A. in Education, Secondary Education (Spanish) Option, or consent of instructor.* (4 units)

SPECIAL MAJOR

Office of the Dean of Undergraduate Studies

*University Hall, Room 368
880-5032*

B.A. IN SPECIAL MAJOR

Requirements (40 units)

Occasionally, students with specialized educational or professional objectives may find that the existing degree programs offered at the university do not satisfy personal needs or career plans and that a carefully structured, interdisciplinary program of study is more appropriate. The special major, through which students design their own program of study drawn from the regular offerings of two or more departments, is intended to meet this need.

In order to be considered for admission to the special major program, a student must select a full-time faculty member to serve as academic advisor and must develop a program of study to be submitted for approval on forms available through the Office of the Dean of Undergraduate Studies. Once the program of study is approved by the University Curriculum Committee and by the dean of undergraduate studies, the student is admitted to the program.

Requirements for the B.A. in Special Major

In addition, the following limitations and regulations apply:

1. To be admitted to the special major program, the student must have more than one full year of academic work (36 quarter units) remaining to complete the minimum requirements for a bachelor's degree.
2. The plan of study must include at least 40 quarter units of upper-division work.
3. No courses that are applied to the general education requirements of the university are applicable toward the minimum requirements of the special major.
4. The special major may not be used as a second major or as a second bachelor's degree.
5. The special major cannot be used to substitute for a degree program offered elsewhere in the California State University which this university is not authorized to offer. It cannot be used to bypass normal graduation requirements, nor can it serve as an alternative to completion of degree requirements for a major in which the student is in academic difficulty.
6. If any independent study courses are included in the program, students must meet the university requirements for such courses at the time they submit their application for a special major.
7. No more than 10 units of Independent Study may be applied to the special major.

THEATRE ARTS

Department of Theatre Arts

Creative Arts Building, Room 111
880-5876

Bachelor of Arts

Theatre Arts

Teaching Credential Program

English with a Theatre Arts Concentration

Minor

Theatre Arts

Certificate Program

Children's Theatre

FACULTY: Ronald E. Barnes, Kathryn Ervin, Lee Lyons, Margaret Perry, Amanda Sue Rudisill, William Slout (Emeritus), Patrick Watkins (Chair)

The theatre arts major is a practical liberal arts degree. The broad range of subjects studied enable the theatre student to qualify for a wide variety of fields. Theatre majors are found in the professional areas of live theatre, film, television, corporate and media training, radio, public relations, advertising, business law, teaching, and higher education.

The diverse nature of theatre explores expressions of human interactions and conflict. This study develops intellectual awareness about the human condition. It helps develop skills for working as a theatre artist and as an individual who understands team work.

Liberal studies majors will benefit from a departmental philosophy that good theatre training is also excellent teacher training. Many courses in the department have no prerequisites, and they will help liberal studies students to prepare for careers in elementary and high school teaching.

The Theatre Arts Department produces four major plays during the academic year. The department also presents two to three student directed/designed productions. In addition, the department has two touring groups: The Imagination Players, an elementary school tour; and the Sun Tour, multiethnic theme plays for high school and community college students.

In addition to acting and backstage opportunities, theatre students are encouraged to work with faculty as assistant directors, designers, stage managers, and in theatre administration. Theatre faculty encourage highly motivated and qualified students to develop their own creative efforts. New student play scripts and innovative approaches to theatre are strongly encouraged.

Theatre arts majors choose to concentrate in one of three areas once they have completed a common core of courses: acting, design/technical, dramatic literature. Students interested in Children's Theatre, see certificate program described on the next page.

B.A. IN THEATRE ARTS

Requirements (83 units)

Requirements for the B.A. in Theatre Arts:

Lower-division requirements (25 units)

1. TA 131. Stage Makeup (2)
2. TA 222. Theatre Laboratory: Construction (1) for a total of (3)
3. TA 232. Lighting and Sound (2)
4. TA 233. Costume Construction (2)
5. TA 235. Fundamentals of Stage Design (4)
6. TA 239. Stagecraft (2)
7. TA 245. Voice and Movement for the Stage I (2)
8. TA 251. Acting I (3)
9. TA 252. Acting II (3)
10. TA 253. Voice and Movement for the Stage II (2)

Upper-division requirements (58 units)

1. TA 320D. Theatre Practicum: Technical Production (2) for a total of (6)
2. TA 346. Directing I (3)
3. TA 351. Acting III (3)
4. TA 361. Theatre History I: Origins Through Medieval (4)
5. TA 362. Theatre History II: Renaissance Through Eighteenth Century (4)
6. TA 363. Theatre History III: Nineteenth Century to the Present (4)
7. *Four units chosen from:*
 - TA 320A. Theatre Practicum: Performance (2)
 - TA 320B. Theatre Practicum: Imagination Players (2)
 - TA 320C. Theatre Practicum: Touring Theatre (2)
 - TA 320F. Theatre Practicum: Dance Performance (2)
8. *Eight units chosen from:*
 - TA 450. Classical Drama (4)
 - TA 451. Mystery to Melodrama (4)
 - TA 455. Modern Drama I (4)
 - TA 456. Modern Drama II (4)
 - TA 461. American Drama (4)
 - TA 462. Afro-American Theatre and Drama (4)
 - TA 475. Shakespeare I (4)
 - TA 476. Shakespeare II (4)

Note: Students choosing the dramatic literature emphasis may not take TA 475. Shakespeare I, or TA 476. Shakespeare II as core courses.

9. *Twenty-two units chosen from one of the following emphases:*

Acting Emphasis:

- TA 312. Oral Interpretation for the Theatre (3)
- TA 345. Voice and Movement for the Stage III (2)
- TA 352. Acting IV (3)
- TA 353. Acting V (3)
- TA 354. Acting VI (3)

Three units chosen from:

- TA 357. Acting for the Camera (3)
- TA 446. Directing II (3)
- TA 482. Readers Theatre (3)

Five units of electives in theatre arts courses.

Design/Technical Emphasis:

- TA 331. Theatre Management (4)
- TA 334. Theatrecrafts (3) for a total of (6)

Six units chosen from:

- TA 332. Stage Lighting Design (3)
- TA 337. Design: Costume Design (3)
- TA 338. Design: Scene Design (3)

Six units of electives in theatre arts courses.

Dramatic Literature Emphasis:

- TA 312. Oral Interpretation for the Theatre (3)
- TA 475. Shakespeare I (4)
- TA 476. Shakespeare II (4)

Three units chosen from:

- TA 332. Stage Lighting Design (3)
- TA 337. Design: Costume Design (3)
- TA 338. Design: Scene Design (3)

Three units chosen from:

- TA 446. Directing II (3)
- TA 482. Readers Theatre (3)

Five units of electives in theatre arts courses.

TEACHING CREDENTIAL PROGRAM

Teaching Credential Program in English - Theatre Arts Concentration

In order to be recommended for the teaching credential in English with a concentration in Theatre Arts (English subject matter program), students must complete the courses listed in the core of the B.A. in English (lower-division requirements 1-3, and upper-division requirements 1-7, see page 160), as well as the following:

1. *Four units chosen from:*

- CSci 127. Introduction to Computer Technology for Educators (4)
- Comm 245. Introduction to TV and Video Production (4)

2. *Four units chosen from:*

- Eng 420. Pedagogical Grammar (4)
- Hum 312. Theories of Language Acquisition and Learning (4)

3. *Four units chosen from:*

- Eng 495. Expository Writing (4)
- Hum 495. Expository Writing for the Humanities (4)

4. TA 222. Theatre Laboratory: Construction (1) for a total of (2)

5. *Six units chosen from:*

- TA 131. Stage Makeup (2)
- TA 232. Lighting and Sound (2)
- TA 233. Costume Construction (2)
- TA 239. Stagecraft (2)

- 6. TA 251. Acting I (3)
- 7. TA 252. Acting II (3)
- 8. TA 351. Acting III (3)
- 9. TA 346. Directing I (3)
- 10. TA 581. Theatre Arts in the Secondary Classroom (4)

Prior to student teaching, students must demonstrate subject matter competence as assessed by the Department of English. For information about the professional education component, prerequisites for and admission to the teacher education program, or specific requirements for the single subject credential program, see page 146 or contact the School of Education C.A.S.E.-Credentials Office.

Note: Completing the requirements of the teaching credential in English with a concentration in Theatre Arts does NOT in itself satisfy the requirements for the major in either English or Theatre Arts.

MINOR IN THEATRE ARTS

Requirements (36 units)

Requirements for a minor in Theatre Arts:

Lower-division requirements (16 units)

- 1. TA 222. Theatre Laboratory: Construction (1) for a total of (2)
- 2. TA 235. Fundamentals of Stage Design (4)
- 3. TA 251. Acting I (3)
- 4. TA 252. Acting II (3)
- 5. *Four units chosen from:*
 - TA 232. Lighting and Sound (2)
 - TA 233. Costume Construction (2)
 - TA 239. Stagecraft (2)

Upper-division requirements (20 units)

- 1. TA 346. Directing I (3)
- 2. TA 351. Acting III (3)
- 3. TA 361. Theatre History I: Origins through Medieval (4)
- 4. TA 362. Theatre History II: Renaissance through Eighteenth Century (4)
- 5. TA 363. Theatre History III: Nineteenth Century to the Present (4)
- 6. *Two units chosen from:*
 - TA 320A. Theatre Practicum: Performance (2)
 - TA 320B. Theatre Practicum: Imagination Players (2)
 - TA 320C. Theatre Practicum: Touring Theatre (2)
 - TA 320D. Theatre Practicum: Technical Production (2)

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an

academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Children's Theatre

Certificate Requirements (33 units)

Lower-division requirements (17 units)

1. TA 212. Oral Interpretation of Literature (4)
2. TA 222. Theatre Laboratory: Construction (1)
3. TA 235. Fundamentals of Stage Design (4)
4. TA 239. Stagecraft (2)
5. TA 251. Acting I (3)
6. TA 252. Acting II (3)

Upper-division requirements (12 units)

1. TA 481. Creative Drama in the Classroom (4)
2. TA 483. Children's Theatre (4)
3. TA 484. Readers Theatre in the Classroom (4)

Performance/production

Four units chosen from:

- TA 240. Improvisation (3)
- TA 320A. Theatre Practicum: Performance (acting in a major or student production) (2)
- TA 320B. Theatre Practicum: Imagination Players (Readers Theatre touring company for elementary schools) (2)
- TA 320C. Theatre Practicum: Touring Theatre (touring company for high schools) (2)
- TA 320D. Theatre Practicum: Technical Production (crew work on major/student production) (2)
- TA 320E. Theatre Practicum: Special Projects (to be arranged in consultation with faculty) (2)
- TA 555. Independent Study (in Children's Theatre Production) (4)

Note: The following courses may be repeated to fulfill the above requirement in the area of performance/production:

- TA 320A. Theatre Practicum: Performance
- TA 320B. Theatre Practicum: Imagination Players
- TA 320C. Theatre Practicum: Touring Theatre
- TA 320D. Theatre Practicum: Technical Production

COURSE OFFERINGS IN THEATRE ARTS (TA)

Lower Division

131. Stage Makeup

Theory and application of stage makeup. (CAN DRAM 14) (2 units)

160. World Drama

Selected readings of dramatic literature (in translation) from the 5th century B.C. to the nineteenth century. (Also offered as English 160. Students may not receive credit for both.)
Prerequisite: English 101 or equivalent. (4 units)

212. Oral Interpretation of Literature

Literary and aesthetic analysis of poetry, prose or drama through performance techniques of oral interpretation. Formerly Theatre Arts 211. (4 units)

221. Theatre Laboratory: Performance

Students select their own scenes and one-act plays which they act and direct in an informal studio setting. Open to all students. A maximum of five units of Theatre Arts 221 or 222 in any combination may be used to satisfy graduation requirements. (1 unit)

222. Theatre Laboratory: Construction

Laboratory application of technical theatre (scenery, costumes or lighting) for an audience. Open to all students. A maximum of five units of Theatre Arts 221 or 222 in any combination may be used to satisfy graduation requirements. (1 unit)

232. Lighting and Sound

Basic electrical theory of stage lighting and sound, production techniques, instrumentation and control equipment. *Corequisite: Theatre Arts 222.* (2 units)

233. Costume Construction

Costume techniques including basic pattern drafting, cutting, fitting and construction of garments. *Corequisite: Theatre Arts 222.* (2 units)

235. Fundamentals of Stage Design

Study of the elements of color, line and texture as they relate to visual analysis of dramatic literature, through two- and three-dimensional projects in set, costume and lighting design. Three hours lecture and two hours activity. (4 units)

239. Stagecraft

Introduction to the theory and practice of scenery and prop construction including the use of tools, materials, techniques and drafting required in execution of designs. Formerly Theatre Arts 231. *Corequisite: Theatre Arts 222.* (CAN DRAM 12) (2 units)

240. Improvisation

A beginning course in improvisational techniques for the actor and for those who will use drama as an educational tool. (3 units)

245. Voice and Movement for the Stage I

Introduction to the fundamental techniques of vocal and physical training of the actor. (2 units)

251. Acting I

Foundation training for actors through theatre games, improvisation and exercises for developing expressive freedom, creativity, relaxation and concentration. (CAN DRAM 8) (3 units)

252. Acting II

Fundamentals for creating a role methodically. Improvisational exercises encouraging the use of such elements as objectives, given circumstances, character analysis and conflict. *Prerequisite: Theatre Arts 251.* (3 units)

253. Voice and Movement for the Stage II

Continuing vocal and physical techniques for the actor. May include physical topics such as, pantomime and physical characterization. *Prerequisite: Theatre Arts 245 or consent of instructor.* (2 units)

260. Introduction to Theatre

An introduction to the basic principles and artistic choices guiding theatre artists. Illustrations will be developed in part from demonstration and participation. Students will be expected to experience theatre as active audience members or production crews. Formerly Theatre Arts 250. (4 units)

Upper Division**302. Analysis of Drama**

Literary analysis of selected plays with special emphasis on how to write about dramatic literature. (Also offered as English 302. Students may not receive credit for both.) *Prerequisite: English 101.* (4 units)

312. Oral Interpretation for the Theatre

Techniques for the oral performance of drama, including literary and aesthetic analysis of plays. *Prerequisite: Theatre Arts 212.* (3 units)

320. Theatre Practicum

Performance students experience role preparation, rehearsal and acting before an audience; Imagination Players gain touring experience in rehearsal and performance of children's literature, readers theatre style; Touring Theatre students experience rehearsal and performance of adult dramatic material; technical production students experience application of scenery, costumes, makeup, lighting, sound or stage management; special projects students experience production of student-developed projects: dance performance students experience choreography development, rehearsal and dancing before an audience. Open to all students. No more than 10 units of theatre practicum may be counted toward fulfilling course requirements in the theatre arts major. No more than 20 units of theatre practicum may be used to satisfy graduation requirements.

- A. Performance (admission by audition only) (2 units)
- B. Imagination Players (2 units)
- C. Touring Theatre (2 units)
- D. Technical Production (2 units)
- E. Special Projects (admission by audition only) (2 units)
- F. Dance Performance (admission by audition only) (2 units)

331. Theatre Management

Survey of fine arts management principles as they apply to theatre. (4 units)

332. Stage Lighting Design

Basic lighting design theories. Lighting design plots for various theatrical styles will be developed. May be repeated for credit. *Prerequisites: Theatre Arts 232 and 235.* (3 units)

334. Theatrecrafts

Theory and application of a theatre craft such as: stage management, shop crafts, scene painting, millinery, pattern drafting, rendering. Experience with the craft will be provided. May be repeated for credit as topics change. (3 units)

337. Design: Costume Design

Advanced projects in the design of costumes with an emphasis on rendering techniques and stylization. May be repeated for credit. *Prerequisite: Theatre Arts 235.* (3 units)

338. Design: Scene Design

Advanced projects in scene design, using both renderings and models. Concentration on an exploration of design styles. May be repeated for credit. *Prerequisite: Theatre Arts 235.* (3 units)

345. Voice and Movement for the Stage III

Highly specialized and advanced vocal and physical techniques for the actor. May include specific movement topics, such as period movement or stage combat. *Prerequisite: Theatre Arts 253 or consent of instructor.* (2 units)

346. Directing I

Fundamentals of play directing through theory and practice. *Prerequisites: Theatre Arts 260 and 351 or consent of instructor.* (3 units)

347. Playwrighting

Fundamentals of play development to include plot, character, structure, theme, culminating in individual performable scripts. (Also offered as English 347. Students may not receive credit for both.) *Prerequisite: English or Theatre Arts 302, or consent of instructor.* (4 units)

351. Acting III

Application of acting techniques through scene study of plays in the contemporary repertory. *Prerequisite: Theatre Arts 252.* (3 units)

352. Acting IV

Continued scene study with an emphasis on plays in the modern classical repertory (for example, Ibsen, Chekhov, Shaw). May be repeated once for credit. *Prerequisites: Theatre Arts 312 and 351.* (3 units)

353. Acting V

Studies and performance of selected styles in theatre from classical times to the nineteenth century. May be repeated once for credit. *Prerequisites: Theatre Arts 312 and 351.* (3 units)

354. Acting VI

Concentrated study on performing Shakespeare, with emphasis on voice, movement, and textual meaning. May be repeated once for credit. *Prerequisites: Theatre Arts 312 and 351.* (3 units)

357. Acting for the Camera

Study and application of acting techniques unique to film and video. *Prerequisite: Theatre Arts 351 or 385.* (3 units)

361. Theatre History I: Origins Through Medieval

Consideration of theatre architecture and theatre practices for the purpose of understanding the major trends in the development of theatre arts. Representative examples of dramatic literature will be read to illustrate those trends. (4 units)

362. Theatre History II: Renaissance Through Eighteenth Century

Consideration of theatre architecture and theatre practices for the purpose of understanding the major trends in the development of theatre arts. Representative examples of dramatic literature will be read to illustrate those trends. (4 units)

363. Theatre History III: Nineteenth Century to the Present

Consideration of theatre architecture and theatre practices for the purpose of understanding the major trends in the development of theatre arts, including the impact of Asian theatre. Representative examples of dramatic literature will be read to illustrate those trends. (4 units)

385. Acting for Non-Majors

Introduction to acting through exercises, improvisations and scene study. Not open to theatre arts majors. (4 units)

430. Advanced Stagecraft

Advanced problems in planning, drafting, construction and rigging of scenery. *Prerequisites: Theatre Arts 222, 235, 239 and 320D.* (3 units)

445. The Camera Eye

Film as a creative art medium. Such topics as art direction and production design for film, sex and violence in film, and film and television lighting will be offered. May be repeated for credit as topics change. (4 units)

446. Directing II

Advanced studies in play directing. *Prerequisite: Theatre Arts 346.* (3 units)

450. Classical Drama

Development of comedy and tragedy in Greece and Rome. (Also offered as English 450. Students may not receive credit for both.) (4 units)

451. Mystery to Melodrama

Development of drama from medieval passion plays to late nineteenth century villain-hissing melodramas. Emphasis on either comedy or tragedy. (4 units)

455. Modern Drama I

European, British and American realism, beginning with variations of the nineteenth century well-made play. Emphasizes such playwrights as Ibsen, Chekhov, Shaw and O'Neill. (Also offered as English 455. Students may not receive credit for both.) (4 units)

456. Modern Drama II

European, British and American anti-realism, including various avant-garde movements. Emphasizes such playwrights as Brecht, Pinter, Wilder and Genet. (Also offered as English 456. Students may not receive credit for both.) (4 units)

461. American Drama

Survey of the American theatre and its drama (Dunlap to Odets) as they reflect the changing patterns of American society. (4 units)

462. Afro-American Theatre and Drama

A survey of the Afro-American theatre from its African origins in the oral tradition through contemporary trends, including issues of politics, race and gender in terms of the American theatre in general. Emphasis on Afro-American playwrights, companies and performers within their social and historical contexts. (4 units)

475. Shakespeare I

Comedies and history plays. (Also offered as English 475. Students may not receive credit for both.) (4 units)

476. Shakespeare II

Tragedies and romances. (Also offered as English 476. Students may not receive credit for both.) (4 units)

481. Creative Drama in the Classroom

Experience with improvisational dramatic techniques which emphasize concentration, imagination and self-expression and are designed to develop creative leadership for parents, recreation leaders, elementary and secondary teachers. May not be counted toward fulfilling requirements in the theatre arts major. (4 units)

482. Readers Theatre

Group techniques for oral performance of literature. Includes the preparation and performance of scripts for Readers Theatre, Choral Theatre, Story Theatre and Chamber Theatre. (3 units)

483. Children's Theatre

Theory and techniques of selecting, directing and producing plays for child audiences; includes examination and evaluation of scripts, audience analysis, and the philosophy and application of children's theatre in an educational setting. (4 units)

484. Readers Theatre in the Classroom

Classroom application of group techniques for oral performance and staging of children's literature. Includes the preparation and performance of scripts to be used for reading enhancement and interdisciplinary studies, as well as the creation of original scripts. Formerly Theatre Arts 382. May not be counted toward fulfilling requirements of the theatre arts major. (4 units)

510. Studies of Major Figures and Genres

May be repeated for credit as topics change. (4 units)

520. Theatre Seminar

Literature and theory relative to topics such as: aesthetics, theatre history, drama, dramatic criticism and design. May be repeated for credit as topics change. (4 units)

535. Independent Project

Advanced individual project in any aspect of departmental productions. *Prerequisite: consent of instructor.* (Credit to be arranged: 1 to 4 units)

555. Independent Study

Study and analysis culminating in demonstrated expertise in the areas of performance, direction, design or theatre research. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (4 units)

581. Theatre in the Secondary Classroom

Integrating aesthetic perception with creative expression in the secondary classroom through the application of theatrical performance and production techniques. *Prerequisites: Theatre Arts 302 or English 302, and Theatre Arts 481 or 484.* (4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

602. Seminar in Dramatic Literature for Stage and Film

Advanced study in particular kinds of dramatic literature and film with special focus on generic problems and issues. May be repeated for credit as topics change. (Also offered as English 602. Students may not receive credit for both.) (4 units)

650. Seminar in Dramatic Production

Advanced studies in theatrical production theories and methods, with special focus on generic issues or problems encountered when transferring dramatic literature to the stage. May be repeated for credit as topics change. (4 units)

Course Offerings in Dance (Dan)

Dan 200. Studies in Dance (2)

Dan 300. Dance Techniques (2)

Dan 355. Dance Notation (3)

Dan 360. Dance History (4)

Dan 450. Choreography (3)

Dan 481. Creative Dance in the Classroom (4)

See Page 132 for full course descriptions.

UNIVERSITY HONORS PROGRAM

Office of the Dean of Undergraduate Studies

University Hall, Room 368
880-5032

The University Honors Program at California State University, San Bernardino offers specialized courses and other enrichment opportunities for highly motivated students who seek an intellectual challenge. Most honors courses fulfill the general education requirements which all students at the university must meet; however the curriculum is designed to add depth and breadth to the undergraduate course of study. Honors students are encouraged to take an active role in their own learning process, to think about problems they will face in creating the future, and to explore their roles in addressing these problems. Integration of subject matter across the curriculum is a primary goal of the program. Students will be encouraged to develop thinking skills and to use these skills in analyzing and evaluating problems of contemporary society. Honors students will have:

- Special academic advising;
- The opportunity to participate in honors activities such as lectures, concerts and art exhibits;
- Honors courses in basic skills such as writing, oral communication and critical thinking;
- Honors seminars which promote interaction among students and faculty;
- Honors courses in specific academic disciplines and interdisciplinary areas;
- Extensive library privileges.

Admission to the Program

Incoming freshmen, sophomores, juniors and transfer students who have shown scholastic ability, intellectual promise, and creativity are encouraged to apply for the University Honors Program. Incoming freshmen should have SAT scores of 1100 and/or ACT scores of 26 and above, a G.P.A. of at least 3.5, and be in the upper tenth of their graduating class. Sophomores, juniors and transfer students who have remained consistently on the Dean's List and/or have maintained a 3.5 overall G.P.A. in previous course work may apply to the program. In addition, any faculty member identifying a student as one who has the potential to profit from the challenge of the program may sponsor a student into the program, with the approval of the Honors Committee.

UNIVERSITY HONORS PROGRAM

Requirements of the Program

To remain in good standing in the Honors Program, students are expected to maintain a G.P.A. of 3.3 ("B+") overall.

Requirements for students who enter the Honors Program as freshmen (38 units)

1. Hon 103A. Language and Meaning (4)
2. Hon 103B. Language and Meaning (4)
3. Hon 103C. Language and Meaning (4)

Note: Honors 103A, B and C must be completed before students will be granted general education credit in Written Communication, Oral Communication and Critical Thinking.

4. Hon 105A. Honors Colloquium (1)
5. Hon 105B. Honors Colloquium (1)
6. Hon 105C. Honors Colloquium (1)
7. Hon 205A. Honors Seminar (1)
8. Hon 205B. Honors Seminar (1)
9. Hon 205C. Honors Seminar (1)
10. A senior project in a department (4)
11. Sixteen additional units of which eight must be upper division, to be taken from honors-designated courses.

Requirements for students who enter the Honors Program as sophomores (23 units)

1. Hon 205A. Honors Seminar (1)
2. Hon 205B. Honors Seminar (1)
3. Hon 205C. Honors Seminar (1)
4. A senior project in a department (4)
5. Sixteen additional units of which eight must be upper division, to be taken from honors designated courses.

Requirements for students who enter the Honors Program as juniors (15 units)

1. Hon 205A. Honors Seminar (1)
2. Hon 205B. Honors Seminar (1)
3. Hon 205C. Honors Seminar (1)
4. A senior project in a department (4)
5. Eight additional upper division units to be taken from honors designated courses.

COURSE OFFERINGS IN UNIVERSITY HONORS (Hon)

Lower Division

103. Language and Meaning

An integrated course in the Honors Program meeting General Education requirements for basic skills in composition, critical thinking, and communication. The course emphasizes using the various basic skills in the process of exploring specific current issues. *Prerequisite: acceptance into the Honors Program.*

- A. (4 units)
- B. (4 units)
- C. (4 units)

105. Honors Colloquium

Analysis and discussion of current ideas and events. Freshman students admitted to the Honors Program are required to enroll in the colloquium each of the three quarters of their freshman year. *Prerequisite: acceptance into the Honors Program.*

- A. (1 unit)
- B. (1 unit)
- C. (1 unit)

205. Honors Seminar

Research and discussion of current events and ideas. Sophomore students continuing in the Honors Program, as well as students entering the program as sophomores or juniors, are required to enroll in the seminar each of the three quarters. *Prerequisite: acceptance into the Honors Program.*

- A. (1 unit)
- B. (1 unit)
- C. (1 unit)

Upper Division**315. Special Topics**

Examination of selected topics for students in the Honors Program. May be repeated for credit as topics change. *Prerequisite: acceptance into the Honors Program. (4 units)*

495. Expository Writing

Advanced expository writing workshop for students in the Honors Program. Writing will include documented research reports, summaries, and analytical papers. Papers and research will be directed toward developing and preparing a final draft report for the senior project. Course fulfills the graduation requirement in writing proficiency. No more than one of the Expository Writing courses (Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, Social Sciences 495) may be taken for credit. Students who have received a grade of no credit in any combination of the expository writing courses two or more times must meet with the 495 coordinator or a designee to design a developmental writing plan as a condition for enrolling for a third quarter. All students must obtain junior status at the time of registration or their course request will be cancelled. Graded A, B, C/No credit. *Prerequisites: acceptance into the Honors Program, English 101 and a minimum of 90 quarter (60 semester) units of college credit. (4 units)*

598. Honors Senior Project

Provides an opportunity for students to conduct an independent project under faculty supervision. Project may be a lengthy research paper, a public performance, a laboratory experiment, a work of art, or may take other forms. *Prerequisites: acceptance into the Honors Program and senior standing. (4 units)*

UNIVERSITY STUDIES

Office of the Dean of Undergraduate Studies

University Hall, Room 368
880-5032

The Office of the Dean of Undergraduate Studies offers the following courses in support of other university programs. All courses are listed in the University Studies section of the *Schedule of Classes* each quarter.

COURSE OFFERINGS IN UNIVERSITY STUDIES (UStd)

25. Academic Study Skills

Designed for the student who needs to work on an independent basis in reading or writing with a developmental specialist or tutor. The course will emphasize comprehension, vocabulary and the writing process after diagnosis of student's needs. Units awarded are not applicable to a baccalaureate degree. May be repeated for credit as topics change. Graded credit/no credit. *Prerequisite: consent of Learning Center program coordinator.*

- A. English 85 (2 units)
- B. English 95 (2 units)
- C. English 101 (2 units)
- D. English 495 (2 units)
- E. General (2 units)

27. Individualized Study Contract

Designed for the student who needs to work on an independent basis under the direction of a study specialist in order to improve skills such as handwriting or spelling. May be repeated. Units awarded are not applicable to a baccalaureate degree. (Credit to be arranged: 1 or 2 units)

37. Introduction to College Study Skills

Introduction to skills needed for success in college, focusing on study strategies such as: time management, listening, note taking and learning from text. Units awarded are not applicable to a baccalaureate degree. (4 units)

40. Advanced Notetaking and Organization

Instruction in adaptation of note taking skills across the curriculum with emphasis on editing, organizing and combining notes from text, class, lab, field and library. Organization of content to enhance concentration and memory and improve test taking ability. Units awarded are not applicable to a baccalaureate degree. *Prerequisite: University Studies 37 or consent of instructor.* (2 units)

45. College Reading

Instruction in comprehension of college texts with focus on adaptation across the curriculum, vocabulary development, reading at efficient rates, and concentration. Units awarded are not applicable to a baccalaureate degree. (2 units)

77. Adjunct for Specific Subjects

Taught as an adjunct to specifically designated classes with emphasis on texts used in those classes. Course objectives include improvement in reading speed, vocabulary and comprehension of texts, awareness of an instructor's lecture style, integration of course materials, comprehension of test questions and study planning. May be repeated for credit as topics change. Units awarded are not applicable to a baccalaureate degree. Graded credit/no credit. *Prerequisite: consent of S.A.I.L. Department.* (2 units)

99. Reading Enhancement

Improvement in speed, vocabulary and reading comprehension. Taught as an adjunct to specifically designated classes with an emphasis on texts used in those classes. May be repeated. Units awarded are not applicable to a baccalaureate degree. Graded A, B, C/No credit. (2 units)

Lower Division

100. First Year Seminar

Academic and practical skills necessary to succeed. Library, computer facilities, academic procedures, time management and study skills, responsible academic and personal attitudes. Introduces student to higher learning. Modes of instruction are guest speakers, discussion, and assignments and activity. Graded A, B, C/No credit.

- A. Freshman Seminar. May be taken only by new freshman students during their first term of attendance. May not be repeated for credit. (2 units)
- B. Transfer Student Seminar. May be taken only by transfer students during their first term of attendance. May not be repeated for credit. (2 units)

VOCATIONAL EDUCATION

School of Education

Faculty Office Building, Room 182
880-5600

Bachelor of Science

Vocational Education

Bachelor of Vocational Education (BVE) Degree Program

Master of Arts

Vocational Education Option

(Degree requirements can be found on Page 364.)

FACULTY: Ron Pendleton

BACHELOR OF SCIENCE IN VOCATIONAL EDUCATION

Requirements (186 units)

Admission to the Program

The Bachelor of Science Degree with a major in Vocational Education is designed to provide students who have significant occupational experience the opportunity to have that experience count as partial credit towards a baccalaureate degree. Qualified applicants can have their work experience evaluated and may be awarded up to 45 units of credit for prior learning which will be applied toward the degree.

In order to qualify for these occupational specialty units, students must have three years full-time, paid occupational work experience and one of the following:

1. Successfully pass the National Occupational Competency Examination (NOCE) in a specialization;
2. An Associate of Arts Degree from a regionally accredited institution in an approved vocational subject field;
3. Have a Swan Bill evaluation done by a State Evaluation Committee. (This requires seven years of paid work experience in addition to 1620 hours full time or 1000 hours part time teaching in an approved institutional program.)

Note: Occupational experience evaluation will only be completed for students who have completed at least 16 quarter units at CSUSB.

Occupational work experience credit is based upon the criteria currently stipulated by the state of California. Students not awarded the full 45 units of work experience credit will be required to take additional elective courses or internships to reach the total of 186 units required for the degree. No more than 45 units of credit by exam of any sort (CLEP, DANTE, EEE, etc.) may be counted toward the degree.

Students must have a minimum of three years paid work experience in order to be admitted to this program.

Requirements for Graduation

- A. Students must complete a minimum of 186 quarter units.
 1. At least 45 of these units must be completed as a regularly enrolled student at this university;
 2. At least 60 of these units must be in upper-division course work;
 3. It is recommended that students choose the following courses to fulfill the general education requirements:
 - a. Comm 120. Oral Communication
 - b. Math 110. College Algebra
 - c. Econ 104. Introduction to Economics
 - d. One of the following (both are recommended):
 - Chem 100. Chemistry in the Modern World
 - Phys 100. Physics in the Modern World
 4. Up to 45 units may be completed within the occupational specialty and/or in approved electives;
- B. Students must earn a grade point average of 2.0 ("C") or better in all work attempted;
- C. Students must complete the upper-division writing requirement, Education 495;
- D. Students must complete the history, constitution and government requirements listed in the general education requirements on Page 57.

Degree Requirements (48 units)

1. ETec 544. Construction of Instructional Materials (4)
2. EVoc 335. Introduction to Vocational Education (4)
3. EVoc 508. Organization and Structure of Designated Subjects Programs (4)
4. EVoc 509. Personnel Management in Designated Subjects Programs (4)
5. *Choose one of the following:*
 - EVoc 510. Field Work in Coordination and Supervision of Designated Subjects Programs (4)
 - EVoc 518. Field Work in Designated Subjects (4)
6. EVoc 519. Computer Applications for Vocational Education Teachers (4)
7. EVoc 520. Curriculum Development in Vocational Education (4)
8. EVoc 521. Assessing Vocational Student Progress (4)
9. EVoc 522. Directing and Managing Occupational Programs (4)
10. EVoc 523. Adult Learning Theory (4)
11. *Choose one of the following:*
 - Mgmt 302. Management and Organizational Behavior (4)
 - Psyc 302. Management and Organizational Behavior (4)
12. Mgmt 455. Human Resources Management (4)

BACHELOR OF VOCATIONAL EDUCATION (BVE) DEGREE PROGRAM

Requirements (186 units)

Admission to the Program

The Bachelor of Vocational Education (BVE) Degree Program has been designed to provide vocational and occupational teachers who have significant occupational and teaching experience, the opportunity to have that experience count as partial credit toward a baccalaureate degree. Qualified applicants can have their work experience evaluated (under provisions of the Swan Bill) and may be awarded up to 60 units of academic credit which will be applied toward meeting the Vocational Arts Major requirements.

Note: In order to qualify for a Swan Bill Evaluation an applicant must have at least five years of paid full-time work experience, at least 1620 hours of full-time or 1000 hours of part-time teaching experience and an appropriate teaching credential.

Applicants must be admitted to the university and should take Vocational Education 335. Introduction to Vocational Education as soon as possible.

Requirements for Graduation

1. Students must complete a minimum of 186 quarter units of college credit:
 - a. At least 45 of these units must be completed as a regularly enrolled student at this university;

Note: Up to 105 quarter units of lower-division course work may be accepted as transfer credit from an accredited community college or other accredited post-secondary educational institutions.

 - b. At least 60 of these units must be in upper-division course work;
 - c. Eighty-six of these units must be in the area of general education as specified in the general education requirements, Page 57;
 - d. Forty-four of these units must be within the vocational arts major. All or most of these units are usually awarded as the result of the Swan Bill Evaluation of the applicant's occupational and teaching experience. At least 20 of these units are counted as upper-division;
 - e. Thirty-two of these units must be in the area of professional education and the vocational credential courses (or their equivalent);
 - f. Twenty-four of these units will consist of electives;
2. Students must earn a grade point average of 2.0 ("C") or better in all work attempted and 3.0 ("B") or better in all professional education courses attempted;
3. Students must complete the upper-division writing requirement (Education 495);
4. Students must complete the history, constitution and government requirements (refer to Page 61);

5. Students must be recommended for graduation by the faculty of the university.

Requirements for the Bachelor in Vocational Education (BVE) Degree:

General Education requirements (86 units)

Vocational Arts Major (44 units), a maximum of 60 units may be awarded by Swan Bill evaluation

Upper-division requirements (56 units)

1. EVoc 335. Introduction to Vocational Education (4)
2. EVoc 501. Principles and Methods for Teaching Designated Subjects (4)
3. EVoc 502. Instructional Support for Teaching Designated Subjects (4)
4. EVoc 503. Contemporary Issues in Teaching Designated Subjects (4)
5. EVoc 504. Principles of Adult Education (4)
6. EVoc 518. Field Work in Designated Subjects (4)
7. EVoc 519. Computer Applications for Vocational Education Teachers (4)
8. EVoc 520. Curriculum Development in Vocational Education (4)

Twenty-four units of electives.

COURSE OFFERINGS IN VOCATIONAL EDUCATION (EVoc)

Upper Division

335. Introduction to Vocational Education

Introduction to the history, philosophy, literature and organizations of vocational education. In-depth study of the Swan Bill application process and the Bachelor of Vocational Education degree program. *Prerequisite: sufficient work and teaching experience to qualify for a Swan Bill evaluation or consent of instructor.* (4 units)

501. Principles and Methods for Teaching Designated Subjects

Application of instructional methodology for designated subjects with emphasis on student performance objectives, lesson planning, teaching methods, educational materials, and evaluation techniques. (4 units)

502. Instructional Support for Teaching Designated Subjects

Examination of instructional support for designated subjects with emphasis on program advisory committees, student placement, facilities planning, budgeting, student organizations, public relations, career advancement and educational philosophy. *Prerequisite: Vocational Education 501 or consent of instructor.* (4 units)

503. Contemporary Issues in Teaching Designated Subjects

Examination of contemporary issues in designated subjects with emphasis on individual education plans, basic skills, school law, multicultural activities, special needs students, safety and performance assessment instruments. *Prerequisite: Vocational Education 501 or consent of instructor.* (4 units)

504. Principles of Adult Education

History, philosophy and social significance of adult education, especially in California; the adult as a student; investigation of the theories and application of the principles of adult education. (4 units)

508. Organization and Structure of Designated Subjects Programs

Investigation and application of principles of facility planning, budgeting, funding sources and related topics as they apply to designated subjects instructional programs. *Prerequisite: a valid designated subjects teaching credential.* (4 units)

509. Personnel Management in Designated Subjects Programs

Principles of personnel selection, evaluation, supervision, school law and related topics as they apply to designated subjects instructional programs. *Prerequisite: a valid designated subjects teaching credential.* (4 units)

510. Field Work in Coordination and Supervision of Designated Subjects Programs

Supervised field work in coordination and supervision of designated subjects programs. Students will contract to perform administrative tasks related to site-based instructional programs. *Prerequisites: a valid designated subjects teaching credential and completion of or concurrent enrollment in Vocational Education 508 and 509 or consent of instructor.* (4 units)

518. Field Work in Designated Subjects

Supervised field work for the Designated Subjects Teaching Credential. Includes lesson planning and instructional delivery in an actual teaching environment with evaluation of teaching performance by the on-site supervisor. *Prerequisites or corequisites: Vocational Education 501 and consent of instructor.* (4 units)

519. Computer Applications for Vocational Education Teachers

Application of personal computers to the preparation of written and graphic materials used by teachers of vocational, occupational and professional subjects. Three hours of lecture and two hours of laboratory. (4 units)

520. Curriculum Development in Vocational Education

Theory and principles of curriculum development as they apply to vocational, occupational and professional courses. Students will develop a complete curriculum for a course that they could teach. *Prerequisite: Vocational Education 501 or its equivalent.* (4 units)

521. Assessing Vocational Student Progress

The development and use of evaluation instruments such as written tests, and criterion-referenced and norm-referenced evaluations. *Prerequisite: Vocational Education 520 or consent of instructor.* (4 units)

522. Directing and Managing Occupational Programs

Principles and techniques of design, implementation, management and evaluation of training organizations and programs. *Prerequisites: Vocational Education 520 and Management 302 or Psychology 302.* (4 units)

523. Learning Theory and Instructional Research Applied to Adult Learners

Application of psychological principles to learning processes relevant to adult learners. Focus is on informed decisions about psycho-educational designs which will maximize individual development in cognitive, affective, conative, and psychomotor areas. (4 units)

542. Seminar in Vocational Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

WOMEN'S STUDIES

School of Social and Behavioral Sciences

Women's Study Program

Faculty Office Building, Room 104
880-5516

Minor

Women's Studies

Certificate Program

Women's Studies

COORDINATOR: Nancy Rose

The university offers a minor and a certificate program in women's studies. Women's studies is an interdisciplinary area of study that uses material from several disciplines to explore women's issues and experiences. Women's studies scholarship and teaching is intended to promote an understanding of the origins and mechanisms of gender differentiation and stratification in human societies.

MINOR IN WOMEN'S STUDIES

Requirements (28 units)

Requirements for a minor in Women's Studies:

1. WStd 200. Introduction to Women's Studies (4)
2. WStd 425. Women as Agents of Social Change (4)
3. *Twenty units chosen from:*
 - Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 - Art 410. Studies in Art: Women in Art (4)
 - Biol 314. Biology of Human Sexuality (4)
 - CJus 451. Women and Crime (4)
 - Comm 411. Women and Communication (4)
 - Econ 333. Women in the Economy (4)
 - May choose only one of the following:*
 - Eng 336. Women Writers (4)
 - WStd 336. Women Writers (4)
 - FLan 320. Masterpieces of Literature: Hispanic Women Writers (4)
 - Geog 330. Geography of Gender (4)
 - HSci 404. Women's Health Issues (4)
 - Hist 395. Topics in History: Women in Chinese History (4)
 - Hist 513. Women in U.S. History (4)
 - May choose only one of the following:*
 - Hum 325. Perspectives on Gender (4)
 - SSci 325. Perspectives on Gender (4)
 - SSci 325. Perspectives on Gender (4)
 - PISt 381. Sex Discrimination and the Law (4)
 - Phil 364. Philosophy of Race and Gender (4)
 - Phil 367. Philosophy and Sexual Politics (4)
 - PSci 340. Sex and Politics (4)

- Psyc 331. The Psychology of Women (4)
- Psyc 349. The Psychology of Gays and Lesbians (4)
- Psyc 375. Seminar in Psychology: Women and Violence (4)
- Soc 335. Images of Birth and Death (4)
- Soc 336. Black Women and Feminism (4)
- Soc 344. Sex Roles: The Life Cycle (4)
- WStd 390. Topics in Women's Studies (4)
- WStd 575. Internship in Women's Programs and Services (2) for a total of (4)
- WStd 595. Independent Study (2-5) for a maximum of (8)

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Women's Studies

Certificate requirements (28 units)

1. *Twenty-eight units chosen from:*
 - Anth 333. Sex and Gender in Cross-Cultural Perspective (4)
 - Art 410. Studies in Art: Women in Art (4)
 - Biol 314. Biology of Human Sexuality (4)
 - CJus 451. Women and Crime (4)
 - Comm 411. Women and Communication (4)
 - Econ 333. Women in the Economy (4)
 - May choose only one of the following:*
 - Eng 336. Women Writers (4)
 - WStd 336. Women Writers (4)
 - FLan 320. Masterpieces of Literature: Hispanic Women Writers (4)
 - Geog 330. Geography of Gender (4)
 - HSci 404. Women's Health Issues (4)
 - Hist 395. Topics in History: Women in Chinese History (4)
 - Hist 513. Women in U.S. History (4)
 - May choose only one of the following:*
 - Hum 325. Perspectives on Gender (4)
 - NSci 325. Perspectives on Gender (4)
 - SSci 325. Perspectives on Gender (4)
 - PISt 381. Sex Discrimination and the Law (4)
 - Phil 364. Philosophy of Race and Gender (4)
 - Phil 367. Philosophy and Sexual Politics (4)
 - PSci 340. Sex and Politics (4)
 - Psyc 331. The Psychology of Women (4)
 - Psyc 349. The Psychology of Gays and Lesbians (4)
 - Psyc 375. Seminar in Psychology: Women and Violence (4)

- Soc 335. Images of Birth and Death (4)
- Soc 336. Black Women and Feminism (4)
- Soc 344. Sex Roles: The Life Cycle (4)
- WStd 200. Introduction to Women's Studies (4)
- WStd 390. Topics in Women's Studies (4)
- WStd 425. Women as Agents of Social Change (4)
- WStd 575. Internship in Women's Programs and Services (2) for a total of (4)
- WStd 595. Independent Study (2-5) for maximum of (8)

COURSE OFFERINGS IN WOMEN'S STUDIES (WStd)

Lower Division

200. Introduction to Women's Studies

An introduction to the growing body of women's studies scholarship. Includes feminist theories of gender stratification and introduces women's issues, experiences and achievements in a variety of fields. (4 units)

Upper Division

336. Women Writers

Literary analysis of selected works by women writers, with special emphasis on historical and contemporary issues of women's lives. (Also offered as English 336. Students may not receive credit for both.) (4 units)

390. Topics in Women's Studies

Examination of selected topics of current interest in women's studies. May be repeated for credit as topics change. (4 units)

425. Women as Agents of Social Change

Historical and contemporary analysis of women as agents of social change, including responses to gender-based discrimination, consideration of feminist theories of social change and debates over desired directions for the future of societies.

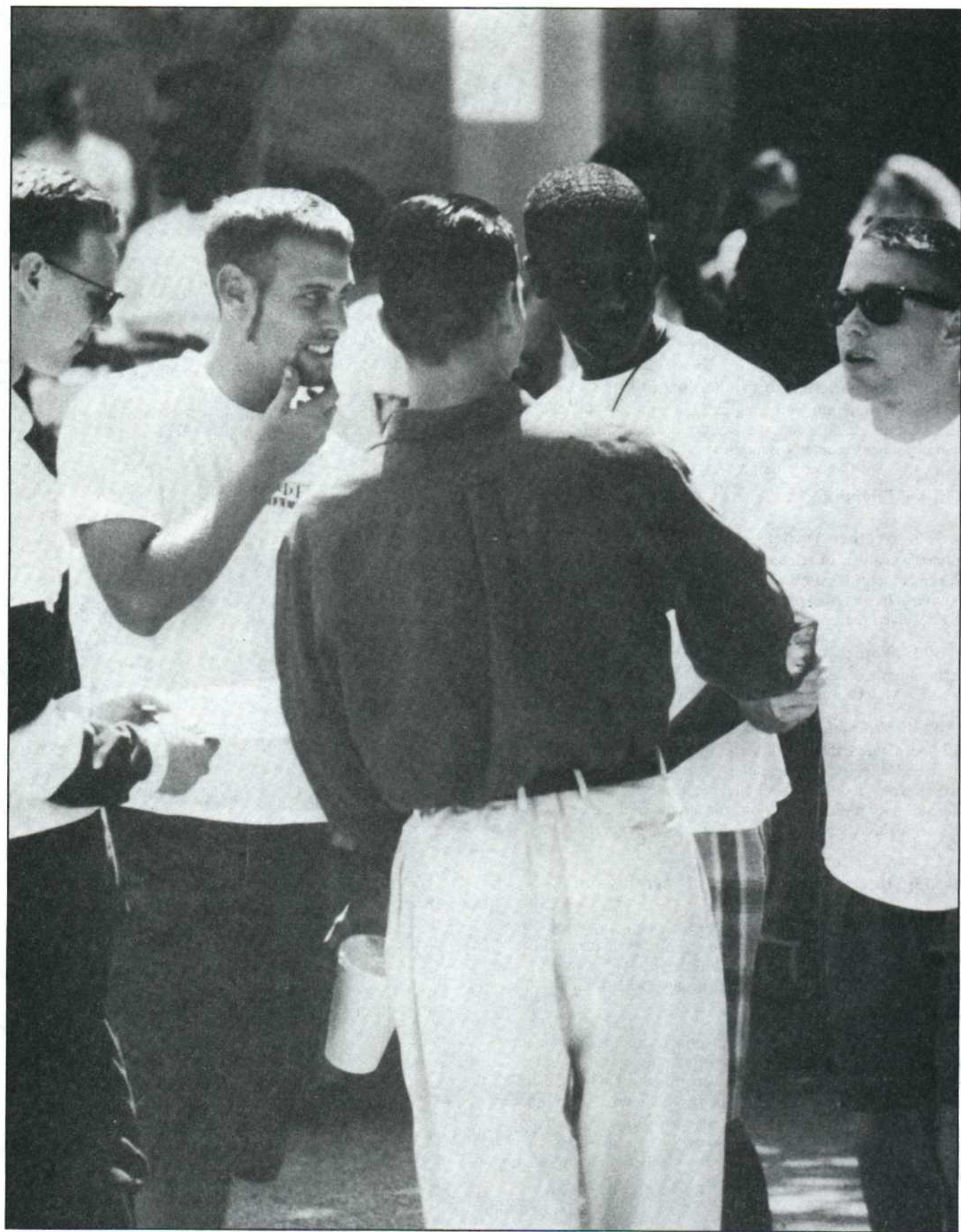
Prerequisite: Women's Studies 200 or consent of instructor. (4 units)

575. Internship in Women's Programs and Services

Supervised work and study in private or public organizations involving women's issues. May be repeated once for credit. Graded credit/no credit. *Prerequisite: consent of women's studies coordinator.* (Credit to be arranged: 2 to 4 units)

595. Independent Study

Investigation of special topics in women's studies that are not covered by the curricular offerings in women's studies or the cross-listed offerings from other departments. No more than 8 units of independent study may be applied toward the minor or certificate in women's studies. *Prerequisites: junior standing, consent of instructor and approval by the Women's Studies Program Committee coordinator.* (Credit to be arranged: 2 to 5 units)



Graduate Studies

Office of Graduate Studies

Administration Building, Room 127
880-5058

Graduate Studies is a large part of the university. At any given time from a quarter to a third of the students attending CSUSB already have bachelor's degrees and are earning certificates, credentials, master's degrees, or are pursuing knowledge for their own pleasure. Graduate Studies offers varied advanced courses of study, including professional programs that lead their graduates into the world of work, and academic master's degrees preparing the student for the Ph.D. as well as advanced professional degrees, such as medicine and law. Nationally recognized and nationally accredited programs are among the Graduate Studies offerings.

Most classes are offered at convenient hours for working students. Financial assistance, research and travel funds are available, with some special financial aid programs for women, ethnic minorities and disabled students in the mathematical and physical sciences.

The Office of the Dean of Graduate Studies encourages graduate education and works cooperatively with all graduate programs to create programs of quality that respond to the needs of students and of the university's service area. Additionally, the office administers the University's Institutes, the M.A. in Interdisciplinary Studies and is responsible for the following functions for all graduate programs:

- Waiver petitions for the Graduate Writing Requirement, the seven-year limit for course work, and the 20-unit limit for classification
- Advancement to Candidacy
- Course overloads
- Changes in Study Plan
- Petitions by all unclassified postbaccalaureate students
- The CSUSB Student Research Competition
- The Graduate Equity Fellowship Program
- The California Pre-Doctoral Program

The university offers the following graduate programs culminating in master's degrees:

- Biology, M.S.
- Business Administration, M.B.A.
- Computer Science, M.S.
- Counseling and Guidance, M.S.
- Criminal Justice, M.A.
- Education, M.A.
- Educational Administration, M.A.
- English Composition, M.A.
- Health Services Administration, M.S.
- Interdisciplinary Studies, M.A.
- Mathematics, M.A.
- National Security Studies, M.A.
- Psychology, M.A., M.S.
- Public Administration, M.P.A.
- Rehabilitation Counseling, M.A.
- Science, M.A.T.
- Social Sciences, M.A.
- Social Work, M.S.W.
- Urban Planning, M.U.P.

Graduate programs at the university are designed to serve a variety of needs. Some students pursue an advanced degree or a credential program in a professional area to enhance their career mobility; others, to expand their knowledge and understanding and to pursue research in a chosen discipline. The university provides for the part-time student, as well as the full-time student, by offering appropriate course work and research opportunities during the day, late afternoon and evening throughout the calendar year.

The **M.S. in Biology** provides further study in various biological concentrations. The unique environmental setting of the campus allows for special emphasis on desert and mountain ecological studies.

The School of Business and Public Administration offers a **Master of Business Administration (M.B.A.)** and a **Master of Public Administration (M.P.A.)**. Both degrees are broad programs designed to provide flexibility for the student to prepare for a career in administration in the private or public sector.

The **M.S. in Computer Science** provides students with the professional expertise to enable them to assume high responsibility positions in business, government, and education in the areas of computer and information systems, giving them the capability of undertaking research and development using abstract models and theories.

The **M.S. in Counseling and Guidance** is a professional program preparing students to become educational counselors. The degree program is designed to fulfill all the California State requirements for school counseling in grades K-12, so that a graduate will concurrently receive the M.S. and the California Pupil Personnel Services Credential.

The **M.A. in Criminal Justice** is designed to serve the growing number of individuals in the criminal justice system who desire postbaccalaureate education, as well as those in more traditional public and private employment who may wish to acquire further education in criminal justice. The degree program offers two options. One is a thesis option designed for students who intend to pursue graduate studies beyond the M.A. level and those students who have special research interests in the criminal justice system. The examination option is designed for students with administrative and management goals.

The **M.A. in Education** offers options in bilingual/cross-cultural education, educational counseling, elementary and secondary education, environmental education, instructional technology, English, history, physical education and Spanish (for secondary teachers), middle grades, reading/language arts, special education, teaching English as a second language and vocational education. The School of Education also offers credential programs designed to prepare students to teach in a variety of settings. In addition to the multiple, single and designated subjects credentials, specialist and services credential programs also are available.

The **Educational Administration M.A.** program prepares individuals to assume leadership roles in school administration, school business management, curriculum development, and supervision of personnel and instruction.

The English Department offers an **M.A. in English**

Composition. There are two concentrations available. The English Composition Program is designed for individuals interested in pursuing studies in the teaching of composition and will also benefit those who need expertise as writers of grants, interpreters of public policy, editors and others interested especially in non-fiction prose. The option in Teaching English as a Second Language prepares students for teaching in high school and college ESL programs.

The **M.S. in Health Services Administration** is designed to meet the need for professionals trained in the management and planning of health care services. The program has three major objectives: (1) to enable students to integrate health science, health services, management and planning skills; (2) to develop the ability to conduct independent research; and (3) to provide the intellectual stimulation and scholarly atmosphere aimed at developing leaders in the field.

An **M.A. in Interdisciplinary Studies** allows a student with unusual educational or vocational objectives to draw from several departments to meet a specific need. The option in Integrative Studies is designed for experienced K-12 teachers. Information on these programs are available from the Dean of Graduate Studies.

The **Master of Arts in Mathematics** is a flexible 2-track program. The Community College Teaching/General track provides a broad background in mathematics and the Mathematics Education track is designed for well-prepared teachers at the K-12 level. All core courses are offered in the late afternoon and evening, elective courses are also offered during the day.

The **M.A. in National Security Studies** is a professionally oriented academic program designed for those who desire to understand the principles and practices of national and international security in contemporary international affairs. The program is offered on campus and at March Air Force Base.

The Department of Psychology offers an **M.S. in Psychology** with concentrations in counseling and industrial/organizational, in addition to an **M.A. in Psychology** with two areas of specialization: general-experimental and lifespan development.

The **M.A. in Rehabilitation Counseling** is a two-year professional program preparing students to be certified rehabilitation counselors who will work with a wide variety of disabled persons in different settings preparing them for job placement.

The three tracks of the **Master of Arts in Teaching with a major in Science** (Elementary, Middle and High School) accommodate teachers in the elementary grades, in middle schools and high schools. A strong laboratory component and an integrated science approach reflect recommendations of the California Commission on Teacher Credentialing. Most science content courses are track specific, while core courses cover general topics such as the history, philosophy and role of science.

The **M.A. in Social Sciences** is designed primarily for secondary school teachers who wish to expand or update their knowledge of the social sciences. The program emphasizes the fields of greatest importance to secondary school

teaching, but electives allow the student to sample the breadth of the social sciences.

The **Master of Social Work (M.S.W.)** prepares professional social work practitioners who are committed to understanding and serving those most in need of help.

The **Master of Urban Planning (M.U.P.)** is an interdisciplinary graduate degree for practicing planners, as well as for individuals working in fields closely related to urban planning, and for citizens who desire a more thorough understanding of urban planning and the land use development process.

Detailed requirements of each program are listed by department in the graduate studies section of the catalog.

Latest details on the status of new programs may be obtained from the appropriate school or department or from the Office of the Dean, Graduate Studies.

General Requirements for Admission

The minimum requirements for admission of postbaccalaureate and graduate students to the California State University, San Bernardino are determined by the Board of Trustees of The California State University and are stated in Title 5, Chapter 1, Subchapter 3 of the California Code of Regulations.

Specifically, a student admitted with unclassified postbaccalaureate standing must: (1) have completed a four-year college course of study and earned an acceptable baccalaureate degree at an institution accredited by a regional accrediting association or have completed equivalent academic preparation, (2) have attained a grade-point average of at least 2.5 in the last 60 semester units (90 quarter units) attempted, and (3) have been in good standing at the last college attended.

Applicants who do not qualify for admission under the provisions cited above may be admitted by special action if, on the basis of acceptable evidence, they are judged to possess sufficient academic, professional and other potential to merit such action. Petitions for admission by special action should be directed to the graduate coordinator of the appropriate master's program or if there is no specific graduate degree in mind, to the Dean of Graduate Studies.

Categories of Admission

Graduate and postbaccalaureate applicants may apply for a degree, a credential or certificate, or may not have a program objective. Depending on their objective, an applicant seeking admission to postbaccalaureate and/or graduate study at the university must be accepted in one of the following categories:

Unclassified Postbaccalaureate Standing. Students wishing to enroll in courses at the university with a professional growth objective, but not necessarily with an objective of a graduate degree or a teaching credential, may be considered for admission with unclassified postbaccalaureate standing when they meet standards specified under General Requirements. No more than 12 units of credit earned in unclassified standing may be used to demonstrate fitness to complete the program or may be counted toward

meeting requirements for a graduate degree. Such units will be accepted only upon approval of the department in which the student is taking a degree. **Admission to the university with unclassified postbaccalaureate standing does not constitute admission to credential or graduate degree programs.** Students admitted in this category must pay the duplicate degree fee of \$100 per unit.

Classified Postbaccalaureate Standing (including Teaching Credentials). Students who have satisfied the general requirements for admission may be granted classified standing for the purpose of enrolling in a particular postbaccalaureate credential or certificate program. They must also satisfy such additional professional, personal, scholastic and other standards as are prescribed for the program, including qualifying examinations.

Postbaccalaureate students interested in working toward a multiple subjects credential, a single subject credential, a services credential or a specialist credential must achieve classified standing. Credential candidates should check credential requirements for minimum grade point average with the appropriate credential program found in the education program section beginning on Page 137.

Information concerning admission requirements for the designated subjects credentials may be obtained from the C.A.S.E. Credentials Office or from the designated subjects coordinator.

Conditionally Classified Graduate Standing. Students who have satisfied the general requirements for admission, but who have deficiencies in prerequisite preparation which can be met by specified additional preparation, including qualifying examinations, may be admitted to a graduate degree curriculum with conditionally classified graduate standing. These deficiencies must be corrected in the specified manner in order for a student to continue in the graduate degree program.

Classified Graduate Standing. Students who have satisfied the general requirements for admission may be admitted to a graduate degree program as classified graduate students, if they satisfactorily meet the professional, personal, scholastic and other standards for admission to the program, including qualifying examinations, and if they have removed deficiencies in the specified manner while in conditionally classified graduate standing. Only those students who show promise of success and fitness will be admitted to graduate degree programs, and only those who continue to demonstrate a satisfactory level of scholastic competence and fitness shall be eligible to continue in such programs. To retain classified standing in a master's program after all course work is completed, a student must enroll in an Extended Enrollment (698) course until a project, thesis or comprehensive examination is completed.

Admission of Graduates with Three-Year Baccalaureate Degrees from Foreign Universities

Applicants for graduate study who have completed baccalaureate degrees at foreign universities which require at least 15 years but less than the equivalent of 16 years of formal education must complete a minimum of 45 quarter

units of additional work upon admission to California State University, San Bernardino as an undergraduate student. Thirty of the 45 units must come from courses in the Schools of Humanities, Social and Behavioral Sciences and Natural Sciences that are included in the university's general education requirements; 24 units must be taken outside the category of the major. The exact allocation of units by category must be approved by Academic Programs. The other 15 units may, if appropriate, be used to satisfy the prerequisites for the student's intended major. Once the courses are completed, the student must reapply to the university as a postbaccalaureate student.

TOEFL and TWE Requirements

All graduate and postbaccalaureate applicants, regardless of citizenship, whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who do not possess a bachelor's degree from a postsecondary institution in a country where English is the principal language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL), and a minimum score of 4 on the Test of Written English (TWE). Individual campuses may require a higher score.

Admissions Procedures

1. All students, including graduating seniors from this university, who plan to enroll as postbaccalaureate or graduate students (e.g., master's degree applicants, those seeking credentials, and those interested in taking graduate level courses for personal or professional growth) for the first time during any regular academic quarter (fall, winter or spring), must file a formal graduate application as described in the graduate and postbaccalaureate admission booklet for admission and a \$55 nonrefundable application fee.
2. Former graduate students of the university must apply for readmission if: (a) they have been absent for more than two quarters (excluding summer sessions) immediately preceding the quarter for which readmission is sought, or (b) they have attended other colleges during their absences from California State University, San Bernardino. Students who have attended other colleges during their absences must submit official transcripts from those institutions. Students who have been absent for three quarters or more must again pay the \$55 application fee.
3. Students who plan to complete all of their work for an advanced degree in summer sessions must still apply for classified standing and advancement to candidacy at the appropriate time; and to become classified, students must file a formal graduate and postbaccalaureate application for admission to the university.

Requests for information regarding admission to the fall, winter or spring quarters and all completed application materials should be directed to the Office of Admissions and Records, California State University, San Bernardino; Attention: Graduate Admissions.

The university begins accepting applications from new and readmitted students on November 1 for the following fall quarter, June 1 for the following winter quarter and August 1 for the following spring quarter. Applicants for

postbaccalaureate programs are limited to the choice of a single campus on each application. If postbaccalaureate applicants wish to be considered by more than one campus, they must submit separate applications and fees to each.

Requirements for a Master's Degree Program

The following standards apply to all master's degree approved graduate programs:

1. The program must include at least 45 quarter units of upper-division and graduate course work (i.e., courses numbered 300-699) taken while in postbaccalaureate standing. At least 70% of this work must be in courses organized primarily for graduate students.
2. The program must include 70% or more quarter units of course work taken in residence on this campus. Work taken in summer session on this campus may be counted as residence credit. Credit by examination and credit for extension work are not considered as residence study.
3. Except for students with coursework from accredited graduate Social Work programs, the program may not include more than 30% total program units in extension and transfer credit from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.
4. The program must follow the department curriculum in effect at the time the student is officially admitted (classified) in the major program or at the time the program is filed in the Office of the Dean of Graduate Studies. Recommendations for any substitutions to the program must be approved in writing by the advisor and attached to the program.
5. The program course work must be completed with a minimum grade-point average of 3.0 ("B"). In addition, candidates must also maintain a minimum grade-point average of 3.0 ("B") in all postbaccalaureate work undertaken at California State University, San Bernardino and/or transfer work following admission to classified graduate standing.
6. The program must include only courses with grades of "C" (2.0) or better. (Grades of "C-" (1.7) or less cannot be used.)
7. The program may not include more than 12 quarter units of work taken in unclassified status or before classified status was attained.
8. The program must be completed within a seven-year period. No more than seven years may elapse between the time of registration for the earliest course listed on the program and the completion of all requirements for the degree.
9. Courses numbered 100 to 299 and in the 1000 to 9999 series cannot be applied toward a master's degree. Courses taken to satisfy quantitative or qualitative deficiencies cannot be applied toward a master's degree.
10. A course taken at another college with a grade such as CR, S, or P cannot be accepted on a master's degree study plan unless such a course with such a grade is accepted by that college or university toward a graduate degree.

11. Graduate writing requirement: Graduate students will be required to pass (or to have passed) the upper-division writing requirement before being fully classified into a graduate program, unless an earlier completion is specified for a particular program. This requirement can be satisfied through one of three means:

1. Completion, with a grade of "B" (3.0) or better, within seven years of acceptance into the program of one of the following courses: Education 495, English 495, Humanities 495, Management 495, Natural Sciences 495, or Social Sciences 495 (all graduate and postbaccalaureate students, regardless of citizenship, whose preparatory education was principally in a language other than English and have a minimum score of 550 on the TOEFL and 4 on the TWE who fail to achieve a grade of "B" (3.0) or higher in one of the 495 courses will be required to retake any 495 class); or
2. Completion, with a grade of "B" (3.0) or better, of an equivalent advanced expository writing course at another college or university within seven years of acceptance into the program, or
3. Satisfactory completion of the Writing Requirement Exemption Examination (WREE) offered at this university.

Further information about the WREE examination (for example, how much it costs, when it is offered, what it covers) is available from the Testing Center, Jack Brown Hall, Room 105 (880-5041). Contact the Office of the Dean of Graduate Studies (880-5058) for questions about the graduate writing requirement as it relates to postbaccalaureate students.

Advancement to Candidacy

Students pursuing an advanced degree through the university should, before completing 20 quarter units toward the degree (36 quarter units for programs over 70 units), prepare and file an official document titled "an approved graduate program" with the department from which they plan to receive the degree. This program lists the specific requirements to be completed before the degree can be awarded. It must be approved by the student's major advisor, the graduate coordinator of the student's program and the Dean of Graduate Studies. Once the program is accepted and approved, the student is officially advanced to degree candidacy.

Standards for Graduate Study

In general, graduate study deals with more complex ideas and demands more sophisticated techniques, searching analysis and creative thinking than undergraduate study. Extensive research is required in both primary and secondary sources, and high quality writing is expected. The student is advised to consider these factors when deciding the amount of course work to be undertaken during any one quarter. Postbaccalaureate students will be held to all pre-requisites for all courses.

Students are required to maintain the following grade-point averages according to their postbaccalaureate or graduate standing.

Students in classified or conditionally classified graduate standing must maintain a 3.0 ("B") grade-point average in all course work attempted.

Students in classified postbaccalaureate standing must maintain grade-point averages appropriate to their credential program. GPA requirements for the various credential programs are listed below:

Basic teaching credentials, single or multiple subject, require a 3.0 ("B") GPA with no grade lower than a "B-" in all work attempted with the exception of the designated subjects credential which requires a 2.5 GPA in all work.

Specialist or services credentials require a 3.0 grade-point average in all work attempted.

Academic Probation: Failure to maintain the appropriate grade-point average will result in the student's being placed on probation. Students on probation must rectify their grade-point deficiencies by the end of the quarter of notification of probationary status, or they automatically will be disqualified and placed in unclassified postbaccalaureate status. To apply for reinstatement to a graduate degree or credential program after disqualification, the student must petition the appropriate program graduate committee.

A student who has been disqualified from a master's degree program may be admitted to another program only on the recommendation of the department to which the student has applied and with the approval of the Dean of Graduate Studies.

Students in unclassified postbaccalaureate standing and students seeking a second bachelor's degree must maintain a 2.5 GPA in all work attempted. Students in this category who are dismissed from the university for failure to maintain these standards must petition the Dean of Graduate Studies for readmission to the university.

Admission by Special Action and Probationary Status

An applicant who does not meet university requirements for admission may be admitted by special action by the graduate coordinator of the program the student wishes to enter, or if unsure, by the Dean of Graduate Studies. Such admission may be in a probationary status, if in the opinion of the graduate coordinator, the student is likely to succeed in the program.

Ordinarily, consideration for probationary status is granted only to mature applicants who, while their total college record does not meet the admission requirements, have demonstrated sufficient ability through recent academic work or other means.

Students admitted on probationary status are subject to the probation and disqualification regulations as stated on page 54. A student admitted on probationary status may be restricted by the graduate coordinator to a limited program.

Readmission of Previously Disqualified Students

After receiving notice of disqualification, a student may petition the graduate coordinator for readmission to the university on probation. All petitions for readmission must

be submitted to the graduate coordinator according to the following schedule:

<u>Petition for:</u>	<u>Petition on file on or before:</u>
Fall	September 1
Winter	December 1
Spring	March 1

Administrative Academic Disqualification

A graduate student may also be placed on probation or may be disqualified by appropriate campus authorities for unsatisfactory scholastic progress regardless of cumulative grade point average or progress points. Such action shall be limited to those arising from repeated withdrawal, failure to progress toward an educational objective and noncompliance with an academic requirement and shall be consistent with guidelines issued by the chancellor.

Retroactive Withdrawal

Requests for withdrawal from a course(s) following the close of the term (retroactive withdrawal) will be considered only for: accident or illness (physical or mental), serious personal or family problems, or military transfer. Documentation is required. In addition, extenuating circumstances must be shown to have prevented withdrawal in a more timely fashion. Partial withdrawal of grades during a term is not permissible for any reason. All courses must be withdrawn and will be noted with a "W" on the official transcript. Lack of awareness of the withdrawal procedures is not an extenuating circumstance.

Employment-related reasons are acceptable only for withdrawals processed during the term in question.

Requests by undergraduates and unclassified post-baccalaureate students must be made in writing to the Director of Advising and Academic Services, UH-380. Requests by credential candidates and graduate students must be made in writing to the Dean of Graduate Studies, AD-127.

Full Time Academic Load

Full time academic status for a postbaccalaureate or graduate student requires a course load of 12 weighted units, following the unit loads used for veteran certification (see table on Page 325). For most graduate students this load equates to two 500- or 600-level courses. To enroll in more than 16 units in any one quarter, a student must have written approval of the advisor and the Dean of Graduate Studies. Students who must work to support themselves, who have time-consuming family responsibilities, who commute long distances, or who are in other difficult circumstances should, in conjunction with their advisors, weigh these factors and alter their course loads accordingly. Financial aid recipients should consult the Financial Aid Office.

Late Registration

The dates of late registration each term will be announced in the class schedule. The university calendar, Pages 4-5, lists registration dates. Late registrants may find themselves handicapped in arranging their programs due to closed classes. A \$25 late registration fee is required.

Adding Classes

Beginning with the first day of the late registration period, all students may add classes, subject to appropriate approvals, continuing up to and including the last day to add classes. (See the *Class Schedule*.)

Grievance Procedures

Information concerning academic or nonacademic matters may be obtained from the Office of Advising and Academic Services. Generally, a grade grievance must be initiated by the student within no more than 40 calendar days after the grade is recorded. The complete policy statement is available from the Director, Advising and Academic Services.

Election of Graduation Requirements

A student remaining in continuous attendance in regular sessions and continuing in the same graduate curriculum in the university may, for the purposes of meeting graduation requirements, elect to meet (1) those requirements in effect at the time the student is admitted into a formal graduate program and enters the curriculum, or (2) those requirements in effect at the time of graduation from the university. Substitutions of or for discontinued courses may be authorized or required by the department or school graduate committee and by the Dean of Graduate Studies.

Two Master's Degrees

Students who wish to secure two different master's degrees may do so. Credits from one master's degree are not applicable to a second master's degree. In no case shall a student be awarded a given master's degree more than once. (See Duplicate Degree Fee, page 44.)

Thesis and Project

Students enrolled in degree programs requiring a thesis or project should contact the Office of the Dean of Graduate Studies for information such as general procedures, preparation of the manuscript, format and style, number of copies and deadlines. In order to graduate in a given quarter, the student must have in the bookstore at least an original and two signed copies on the appropriate paper and approved by the Office of the Dean of Graduate Studies no later than the last day of the exam period of the quarter in which the student plans to graduate.

Graduation Requirement Check

Candidates for degrees to be awarded must request a graduation requirement check at the Office of Admissions and Records prior to the end of the term of their expected graduation. Advancement to Candidacy is needed before the graduation check can be completed.

Deadlines and fees for filing are published in the catalog and in the *Class Schedule*.

Students not completing their degree in the term applied for will need to refile and pay for the later term. Access to registration for terms subsequent to the stated graduation will not be granted until the graduation check is refiled.

Commencement

Participation in commencement activities is voluntary. December 1994, March 1995 and prospective June, September and December 1995 graduates are eligible to participate in the June 1995 commencement exercises. In order to get commencement information to all eligible students, the deadline to file a graduation check and be included in the commencement program is the last working day in April. Students who file a graduation check in May and June may still participate in commencement, but will not have their names included in the commencement program. Appropriate information will be sent to these students in May 1995. Graduates and candidates wishing to participate in the commencement ceremony will be required to pay a commencement fee. Questions regarding commencement should be directed to the Commencement Hotline, 880-7050.

Change in Approved Graduate Program

If during graduate study a master's candidate wishes to change the approved program by adding or removing a course, this may be done under certain circumstances. A request for such a change must be initiated by the student and approved by the graduate coordinator, the department chair and the Dean of Graduate Studies.

Credit by Evaluation (Examination)

A graduate program, while building upon course work previously completed, should be used to acquire new knowledge and skills. Acquisition of units through credit by evaluation, on the other hand, relies inherently on old knowledge and skills. Therefore, prerequisite courses and other requirements outside of the formal program may be challenged, but units gained through credit by evaluation cannot be included within the formal program of study.

In cases where a graduate student may possess the necessary knowledge and skill and wishes to challenge a course within the formal program of study, a petition must be submitted sequentially to the instructor of the specific course, the department or school graduate committee, and the Dean of Graduate Studies. Contingent to approval of the petition by the Dean of Graduate Studies is the condition that an additional course be added to the formal program as elective credit to replace each course that is successfully challenged through credit by evaluation.

Students may not enroll in a course they plan to challenge but must register for credit by examination in the office of the school or department concerned before the first day of classes of the term in which the course is offered. Some presumptive evidence is required to indicate that the student has a reasonable chance of passing the examination. The student must complete the examination within the first two weeks of the term. Those students who are unsuccessful in challenging may add the course subject to the regulations for adding a class printed in the quarterly *Class Schedule*. A student who passes an examination is given the grade of CR for that course. No official record is made of failures in these examinations. A fee may be charged for these exami-

nations, and they are available only to currently enrolled students.

Phi Kappa Phi

The university has an active chapter of the national honor society of Phi Kappa Phi, whose purpose is the recognition and encouragement of superior scholarship in all academic disciplines. Membership is by invitation issued to selected juniors, seniors and graduate students who have excelled in scholarship and who meet the chapter's requirements.

Graduate Council

The coordinators of each graduate program, the Dean of Graduate Studies, the President of the Faculty Senate and the President of the Council of Graduate Students make up the Graduate Council. This group discusses all issues of policy and practice related to graduate study at the university.

Council of Graduate Students

The Council of Graduate Students is made up of at least one student representative from each graduate program. The Council serves as the voice of graduate students on campus and sponsors a number of activities and events supporting graduate education throughout the academic year.

Concurrent Enrollment

A graduate student enrolled at the university may enroll concurrently for additional courses at another institution only with advance written approval from the graduate advisor and the Dean of Graduate Studies. Ordinarily, permission will not be granted when the study load in the proposed combined program exceeds 16 quarter units.

Financial Aid Eligibility in Unclassified Postbaccalaureate Status

Unclassified postbaccalaureate students, since they are not in a degree program, are not eligible for financial aid. Students taking prerequisite courses under the direction of a graduate program in preparation for entrance at the master's level, are eligible for one year of loans (at the freshman rate). Unclassified postbaccalaureate students are not eligible for state university grants since they do not pay a state university fee.

Postbaccalaureate Credit for Seniors

All course work (numbered 300 or above) completed in the final quarter before graduation that is not required for the bachelor's degree will automatically be considered postbaccalaureate credit unless the student petitions otherwise. These courses may not necessarily be accepted in a graduate program. Consult the graduate coordinator of the master's program in question. Petitions are available in the Admissions and Records Office.

Repeat of Courses

Classified and conditionally classified graduate students may be permitted to repeat a course taken as an undergraduate once with approval of the advisor and only to remove a

deficiency. A subsequent repeat must be approved by the school or department graduate committee. In no case shall such credit be counted toward the units required for a master's degree. The last grade earned shall apply toward the student's cumulative postbaccalaureate GPA and shall not replace the grade in the undergraduate record.

Classified and conditionally classified graduate students may be permitted to repeat a course at CSUSB that was taken for graduate credit only by petition to and approval of the school or department graduate committee. The last grade earned will apply to the student's cumulative postbaccalaureate GPA.

Classified postbaccalaureate students (for example, students officially admitted to teaching credential programs) may be permitted to repeat a course taken as an undergraduate only by petition to and approval of the appropriate school or department committee and the grade earned shall not replace the grade in the undergraduate record. Courses taken for postbaccalaureate credit may be repeated at CSUSB only by petition to and approval of the appropriate school or department committee. In both cases the last grade earned shall apply to the student's cumulative postbaccalaureate GPA.

Unclassified postbaccalaureate students may be permitted to repeat a course taken as an undergraduate. However, the grade earned shall not replace the grade in the undergraduate record. Unclassified postbaccalaureate students who are taking courses that *are not part of a graduate degree program and who are not pursuing any degree objectives* are subject to the same repeat of courses regulations as undergraduates. Courses taken for postbaccalaureate credit by an undergraduate as defined under "Postbaccalaureate Credit for Seniors," may be repeated at CSUSB only by petition to and approval of the Dean of Graduate Studies. In both cases, the last grade earned shall apply to the student's postbaccalaureate GPA.

Students in any category may be permitted to repeat one course at CSUSB that was taken for graduate credit (i.e., that is applied towards a master's degree) one time. The petition requesting this permission includes an automatic request to discount the first attempt. When approved, the original course grade on the student's permanent record will be discounted. Only the last grade earned shall apply to the student's cumulative postbaccalaureate GPA. If the student has repeated the course without filing a petition, the two grades will be averaged for the cumulative postbaccalaureate GPA.

Retroactive Withdrawal

Requests for withdrawal from a course(s) following the close of the term (retroactive withdrawal) will be considered only for: accident or illness (physical or mental), serious personal or family problems, or military transfer. Documentation is required. In addition, extenuating circumstances must be shown to have prevented withdrawal in a more timely fashion. Partial withdrawal of grades during a term is not permissible for any reason. All courses must be withdrawn and will be noted with a "W" on the official transcript. Lack of awareness of the withdrawal procedures is not an extenuating circumstance.

Employment-related reasons are acceptable only for withdrawals processed during the term in question.

Requests by undergraduates and unclassified postbaccalaureate students must be made in writing to the Director of Advising and Academic Services, UH-380. Requests by credential candidates and graduate students must be made in writing to the Dean of Graduate Studies, AD-127.

Leave of Absence

Any student who plans to be absent from the university for more than two terms must file a leave of absence to preserve the student's current catalog rights (Title 5, Article 5, Sec. 40401). A petition must be filed by a graduate student and approved at the Office of the Dean of Graduate Studies.

The leave of absence policy covers interruptions which are involuntary (medical) or voluntary (military, personal or planned educational leave) if related to the graduate student's educational objective. With an approved leave of absence, the student may be absent from the campus without losing rights to specific degree requirements under an earlier catalog, which may be more advantageous for the student.

Petitions for leave of absence should be filed in advance of the interruption in enrollment with their program office. While medical and military leaves may be considered retroactively if supported by individual circumstances, planned educational leaves cannot since they constitute an agreement or "contract" which must be set in advance.

An application for readmission must be filed by students returning from leaves of one or two terms only if another college or university was attended during the absence.

Students returning from a medical or military leave of absence of more than two terms must file an application for admission and must also pay the current application fee. The maximum duration of a planned educational leave is two calendar years, with no application fee charged at readmission within the two-year limit. Applications for readmission must be filed within the term of return. Filing periods for fall term begin the preceding November 1, for winter term the preceding June 1, and for spring term the preceding August 1.

Students who do not return to CSU, San Bernardino at the conclusion of their planned leaves and those who enroll elsewhere without permission of the Admissions and Records Office will be considered to have withdrawn from the university at the end of their last term of regular enrollment.

Leaves of absence will not be approved for students subject to disqualification or dismissal due to academic deficiencies or disciplinary action. Disqualified students reinstated immediately or readmitted after one term may retain catalog rights.

Students not completing any degree applicable course work or who are enrolling only in Summer Session or extension courses or who are auditing courses are not eligible for leaves of absence.

Medical Leave of Absence: requests must be accompanied by a statement from a medical doctor explaining why the student must interrupt enrollment. No limit exists on the number of terms of absence allowed, except that leaves for pregnancy are restricted to the term of delivery unless

verified medical circumstances indicate a longer time is required for a recuperation. **An application fee is charged at readmission for a leave of three or more terms.**

Military Leave of Absence: requests must be accompanied by a copy of military orders indicating induction date. Twelve terms of absence are the maximum that can be approved. **An application fee is charged at readmission for a leave of three or more terms.**

Planned Educational Leave of Absence: is defined as a planned interruption or pause in a student's regular education during which the student temporarily ceases his or her formal studies at CSU, San Bernardino to pursue other activities that contribute to particular educational goals and objectives. This will not jeopardize the rights and privileges normally associated with continuous attendance. The student must plan to return to CSU, San Bernardino at the end of the leave. Such activities may be for the purpose of clarifying or enriching educational goals and may include travel for educational purposes, on-the-job experience in the area of vocational or educational opportunities, or undertaking expanded responsibilities in an activity related to the student's educational or career goals.

Since students will maintain their catalog rights as when they left, they **MUST** take courses that would transfer back. Therefore, a student must also file a concurrent enrollment form with the Office of Admissions and Records for prior approval of the courses they plan to take. Students under an educational leave who do not file a concurrent enrollment form and who take courses which are not transferable, will fall under any revised major requirements when they return. No application fee is charged at readmission for a leave within the two year limit with an approved Planned Educational Leave of Absence. Postbaccalaureate students pursuing a second bachelor's degree are eligible for a leave of absence.

Transcripts

Applicants for unclassified postbaccalaureate standing must furnish official transcripts from each college or university attended. A separate transcript from each college or university is required even though one transcript may show work taken at another institution.

Applicants for classified postbaccalaureate standing (teaching credentials), or conditionally classified and classified graduate standing must furnish *two* official transcripts from each institution attended.

Students who attend summer sessions only need not file transcripts *unless* they plan to earn degrees or credentials at California State University, San Bernardino.

Admission of Summer Session Students

The university normally offers course work at all levels in its summer sessions, but enrollment in a summer session does not constitute admission to the university. Summer session students can pursue postbaccalaureate course work as unclassified students, but to become classified students they must file a formal application for admission to the university. Although resident study is highly desirable, some

students may be able to complete degree programs through summer study only.

Admission from Nonaccredited Schools

Graduates of nonaccredited schools who give evidence of unusual promise and superior background may petition the Dean of Graduate Studies for admission as unclassified postbaccalaureate students. Such students who wish to enter a specific graduate program must then petition the appropriate school or department for admission to conditionally classified graduate status. Requirements for admission to conditionally classified status shall be determined by the concerned department and approved by the Dean of Graduate Studies.

Limitations of Enrollment

Entrance of postbaccalaureate students to any program may be subject to limitations (i.e., each master's degree or credential program may restrict enrollment whenever limitations of facilities and/or staff warrant).

Veterans Information and Enrollment Certification

California State University, San Bernardino, is approved for the training of veterans of the military services and their dependents under educational assistance programs, established by the state and federal governments. Applications for educational benefits may be obtained directly from the veterans certification clerk in the Office of Admissions and Records.

Student enrollment certification is based on the following unit loads:

Full time	12 weighted units
determined as follows:	
500- and 600-level course weighted at 1.5 units	
300- and 400-level course weighted at 1.0 units	
100-200 no certification unless course is stated condition for admission to a graduate program	
3/4 time	9.0 to 11.5 weighted units as determined above
1/2 time	6.0 to 8.5 weighted units as determined above

The university will certify course loads to the Veterans Administration based on the criteria above for units which are degree or objective applicable. Veterans enrolled less than half time are eligible for reimbursement of tuition and fees only.

Independent study and self-paced courses will be certified for monthly educational benefits when the student is concurrently enrolled in residence and independent study courses. The independent study and self-paced courses will be reported at full value up to a maximum of five units. Students enrolled in independent study or self-paced courses exclusively are eligible for reimbursement of tuition and fees only.

Full-Time Equivalency - This weighted-unit chart is used to calculate full time status for graduate students.

BIOLOGY

Master of Science in Biology

Department of Biology

*Biological Sciences Building, Room 217
880-5305*

FACULTY: Nicole Bournias, Klaus Brasch, Herbert Brunkhorst, Marilyn Cruz-Alvarez, Richard Fehn (Acting Chair), James Ferrari, Dalton Harrington (Emeritus), Michael Loik, Sarojam Mankau, David Polcyn, Alexander Sokoloff (Emeritus), Stuart Sumida, Jeffrey Thompson, Ching-Hua Wang, Ruth Wilson

MASTER OF SCIENCE IN BIOLOGY

Requirements (45 units)

The Master of Science in Biology is designed to provide the flexibility required to develop specific course programs and acceptable thesis research proposals based upon the individual graduate student's interests and background. The general goal of the program is to provide the student with opportunity for improvement of competence, development of the ability to continue self-directed study, and development of intellectual responsibility in preparation for professional leadership in biology.

The graduate program in biology provides training in various concentrations of current research interest in molecular and population genetics, physiology, immunology, molecular biology, population and systematic ecology, neurobiology, plant and animal developmental biology, cellular biology, vertebrate morphology and paleontology and science education.

Admission to the M.S. Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A baccalaureate degree from an accredited college or university;
2. Completion of an undergraduate major in biology or associated fields (e.g., microbiology, botany, zoology or chemistry with at least 30 quarter units of upper-division biology course work);
3. One year each of laboratory courses in: general biology, general chemistry, organic chemistry and physics;
4. One full-term course in basic calculus or methods in calculus;
5. A cumulative undergraduate grade point average of at least 3.0 ("B") in all courses used for credit in the major;
6. Completion of the graduate writing requirement;
7. Submission to the Department of Biology Graduate Committee, scores from the Graduate Record Examination (GRE) including advanced testing in biology;
8. Submission to the Department of Biology Graduate Committee a one-page, typewritten statement of the student's preparation for graduate study, goals in the

graduate training program, potential area of research and possible advisor (for thesis option) and professional goals following completion of the M.S.;

9. Submission of three letters of recommendation from people who are in a position to make relevant comments on the student's intent and potential for success in the M.S. program. At least two of the letters should be from current or former college or university faculty familiar with the student's scholarship and related activities.

Application deadlines for fall, winter and spring quarter admission are May 1, October 1, and January 15, respectively.

Advancement to Candidacy

In order to be advanced to candidacy, the student must have:

1. Achieved classified status;
2. Been accepted by a major advisor from the Department of Biology, if a thesis project is selected;
3. Completed at least 15 quarter units of work applicable to the degree program as a graduate student at this university with the approval of the Department of Biology Graduate Committee, and with a minimum grade point average of 3.0 ("B");
4. Gained a recommendation for advancement to candidacy from the Department of Biology Graduate Committee;
5. Submitted a formal program of graduate course work prepared in consultation with and approved by the Department of Biology Graduate Committee and/or the major advisor;
6. Gained final approval of the program and of the candidacy itself by the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 45 quarter units of acceptable graduate-level work included in the formal program, with no less than 32 units completed in residence at this university and with at least 24 units gained from 600-level courses in biology;
2. Advancement to candidacy for the degree and approval of the specific program of courses;
3. A grade point average of 3.0 ("B") in all graduate course work fulfilling the requirements of the Master of Science in Biology and grades of "C" (2.0) or better in each course in the program;
4. Completion of a final oral examination concluded by acceptance of the thesis (Plan I); or satisfactory completion of the Comprehensive Final Examination (Plan II);
5. Any additional general requirements not cited above and listed on Page 320.

Department Graduate Committee and Major Advisor

The Department of Biology Graduate Committee consists of the graduate program coordinator and two or more faculty members. This committee has general supervision over the work of students progressing toward the Master's degree, and will determine whether students are adequately prepared for graduate study in biology.

Each new graduate student should consult with the graduate program coordinator for advice in selection of the appropriate graduate program. Students choosing to complete a thesis are responsible for selecting their major advisor and, in turn, must be accepted by the major advisor. The major advisor in consultation with the student will develop a program of specific courses and an acceptable thesis research proposal based on the student's interests, abilities and preparation. The major advisor will direct the thesis research. The program of courses and the thesis topic, as well as any subsequent modification of these, are subject to approval by the Department of Biology Graduate Committee and the Dean of Graduate Studies.

Students following the non-thesis program should consult directly with the Department of Biology graduate program coordinator.

Students currently enrolled in the graduate program wishing to take courses off campus and include them in the degree program must petition the Department of Biology for approval either through the graduate program coordinator or the major advisor, otherwise the course may not be accepted as part of the program. 1000- to 9999-level extension courses are not applicable to the graduate program.

300-level courses taken will be accepted only by written approval of the department. 300-level courses are seen as support courses and therefore are not generally applicable to the graduate degree program.

Courses taken to satisfy quantitative or qualitative deficiencies cannot be applied toward a master's degree.

Thesis and Final Oral Examination Program

Students electing this program, Plan I below, must conduct an original research study and from these efforts write a thesis acceptable to the major advisor, the department graduate committee and the Dean of Graduate Studies. The student should consult the Department of Biology for details on preparing the thesis manuscript.

A final oral examination consisting primarily of discussion of the thesis and thesis research is required. The official examiners are the major advisor, the department graduate committee, and a representative from outside the Department of Biology chosen by the Dean of Graduate Studies. Successful completion of the final oral examination includes acceptance of the thesis by the examiners.

Available research areas include:

- Cell Biology
- Developmental Biology
- Ecology
- Genetics
- Molecular Biology
- Morphology
- Parasitology
- Physiology
- Population Biology

For possible combinations of areas or other areas consult with the Department of Biology.

Non-Thesis Alternative Program

Students pursuing this alternative are required to pass the Biology Department graduate comprehensive examination in addition to the completion of required course work selected

from four major curricular areas in biology as described in Plan II below. This requirement serves to provide breadth of background at an advanced level for the student not electing a thesis. Satisfactory completion of the Plan II must be certified by the Department of Biology Graduate Committee before graduation from the program is possible.

Degree Requirements (45 units)

Plan I: Thesis and Final Oral Examination Program

1. Biol 690. Graduate Seminar in Biology (2)
2. Biol 699A. Thesis Research and Thesis (3)
3. Biol 699B. Thesis Research and Thesis (3)
4. Biol 699C. Thesis Research and Thesis (3)
5. *Fourteen units*, with at least two units chosen from each area (A,B,C,D) below:
 - A. Biol 600. Advanced Topics in Molecular Biology (2)
 - Biol 605. Advanced Topics in Cell Biology (2)
 - Biol 624. Advanced Topics in Physiology (2)
 - Biol 677. Advanced Immunology (2)
 - Biol 678. Advanced Microbiology (2)
 - B. Biol 620. Advanced Topics in Plant Biology (2)
 - Biol 670. Advanced Topics in Ecology (2)
 - Biol 675. Advanced Topics in Parasitology (2)
 - C. Biol 650. Advanced Topics in Genetics (2)
 - Biol 660. Advanced Topics in Development (2)
 - D. Biol 664. Biosystematics (2)
 - Biol 680. Advanced Topics in Evolution (2)
6. *Twenty units of electives* to be chosen from biology or related courses at the 600-, 500- and 400-levels.
7. Attendance of at least one per quarter Biology Department graduate presentations or selected colloquia, until the thesis has been defended satisfactorily.

Plan II: Non-Thesis Alternative Program

1. *Four units of:*
 - Biol 690. Graduate Seminar in Biology (2)
2. *Twenty-two units, with at least four units chosen from each area (A,B,C,D) below:*
 - A. Biol 600. Advanced Topics in Molecular Biology (2)
 - Biol 624. Advanced Topics in Physiology (2)
 - Biol 677. Advanced Immunology (2)
 - Biol 678. Advanced Microbiology (2)
 - B. Biol 620. Advanced Topics in Plant Biology (2)
 - Biol 670. Advanced Topics in Ecology (2)
 - Biol 675. Advanced Topics in Parasitology (2)
 - C. Biol 650. Advanced Topics in Genetics (2)
 - Biol 660. Advanced Topics in Development (2)
 - D. Biol 664. Biosystematics (2)
 - Biol 680. Advanced Topics in Evolution (2)
3. *Nineteen units of electives to be chosen from biology or related courses at the 600-, 500- and 400-levels.*
4. Upon completion of all course work, attendance of at least one per quarter Biology Department graduate presentations or selected colloquia, until the comprehensive examination has been passed.
5. Successful completion of the Department of Biology Comprehensive Examination.

COURSE OFFERINGS IN BIOLOGY (Biol)

Upper Division

522. The Genetics and Ecology of Populations

Genetic and ecological mechanisms influencing the development, maintenance and evolution of populations. Four hours lecture. *Prerequisites: Biology 421 and 422, or 423.* (4 units)

530. Scanning Electron Microscopy

Theory and techniques of scanning electron microscopy. Lectures on theory of operation of the scanning electron microscope and specimen preparation. Laboratory includes hands-on training in the use of the scanning electron microscope. Laboratory projects will teach technical aspects of specimen preparation and microscope use. Three hours lecture and six hours laboratory. (Also offered as Geology 530. Students may not receive credit for both.) *Prerequisites: senior standing and consent of instructor.* (5 units)

531. Transmission Electron Microscopy

Theory and techniques of transmission electron microscopy. Lectures on theory of operation of the transmission electron microscope and specimen preparation. Laboratory includes hands-on training in the use of the transmission electron microscope. Laboratory projects will teach technical aspects of specimen preparation and microscope use. Three hours lecture and six hours laboratory. (Also offered as Geology 531. Students may not receive credit for both.) *Prerequisites: senior standing and consent of instructor.* (5 units)

532. Techniques in Ultrastructure Analysis

Specialized techniques in ultrastructural analysis using either the scanning or transmission electron microscope. Topics will vary, but will include specialized techniques in specimen preparation, alternative image detectors, and image analysis. Theory of the analysis and training in the technical aspects will be covered. Three hours lecture and six hours laboratory. (Also offered as Geology 532. Students may not receive credit for both.) *Prerequisites: Biology 530 or 531, or Geology 530 or 531 and consent of instructor.* (5 units)

553. Physical and Chemical Limnology

Physical and chemical characteristics of lakes and streams as related to activities of the natural biota, environmental factors and the geological substratum. Laboratory work primarily related to the standard chemical analysis of natural waters and studies of various physical parameters. Two hours lecture and six hours laboratory. *Prerequisites: Biology 200, 201, 202, 450 and Chemistry 217 or 245.* Recommended: a field course in geology. (4 units)

554. Biology of Aquatic Populations

Dynamics of aquatic populations, with consideration of the influence of environmental factors on their activities. Laboratory dealing with construction of quantitative models applicable to the study of aquatic populations. Two hours lecture and three hours laboratory. *Prerequisite: Biology 450.* Recommended: courses in aquatic plant biology, invertebrate biology and vertebrate biology. (3 units)

575. Internship in Biology

Supervised work and study in work situations involving biological research and technical skills. May be applied only once toward degree electives in biology programs. May be repeated twice for free elective credit. Graded credit/no credit. *Prerequisite: department approval in the quarter prior to registration.* (2 units)

590. Senior Seminar

Survey of current literature, methods and ethics of scientific inquiry. May be repeated once as topics change. *Prerequisites: Biology 200, 201, 202, and a minimum of 15 upper-division biology courses supportive of the topic area and senior standing.*

- A. Molecular (2 units)
- B. Biosystematics (2 units)
- C. Cellular (2 units)
- D. Physiology (2 units)
- E. Ecology (2 units)
- F. Animal Use (2 units)
- G. Genetics (2 units)
- H. Evolution (2 units)
- I. Microbiology (2 units)
- J. Zoology (2 units)
- K. Botany (2 units)

595. Independent Study

Laboratory and/or library research in selected areas in biology conducted under the direction of a faculty member. A total of six units in Biology 595 may be applied toward graduation. Consent must be obtained no later than the advisement period preceding the quarter of enrollment. All students will be required to attend the Biology Department colloquium called by the department chair each quarter until their projects are completed. Graded credit/no credit. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and department approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students
Enrollment is limited to students formally admitted to the M.S. in Biology. Instructor must verify consent prior to registration.

600. Advanced Topics in Molecular Biology

An in-depth consideration of selected research areas in molecular biology. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

605. Advanced Topics in Cell Biology

An in-depth consideration of selected research areas in cell biology. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

620. Advanced Topics in Plant Biology

An in-depth consideration of selected areas of current study in plant biology. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

624. Advanced Topics in Physiology

An in-depth consideration of selected research areas in physiology. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

650. Advanced Topics in Genetics

An in-depth consideration of selected research areas in genetics. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

660. Advanced Topics in Development

An in-depth consideration of selected research areas in developmental biology. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

664. Biosystematics

Fundamental concepts of classification systems, biometric and experimental taxonomic procedures, nomenclature and systematic literature; both plant and animal materials used. *Prerequisites: Biology 421 and 422, or 423 and one taxonomy-based course; e.g. Biology 319, 331, 335, 342, 353, or 354. Recommended: Mathematics 305 (or 350).* (2 units)

670. Advanced Topics in Ecology

Literature survey of specific topics related to community or ecosystem dynamics. May be repeated for credit as topics change. *Prerequisite: Biology 450 or equivalent.* (2 units)

675. Advanced Topics in Parasitology

An in-depth consideration of selected research areas in parasitology. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

677. Advanced Immunology

An in-depth examination of current research in cellular and molecular immunology. *Prerequisite: Biology 476.* (2 units)

678. Advanced Microbiology

An in-depth examination of current research in pathogenesis of microorganisms. *Prerequisite: Biology 220 or 320.* (2 units)

680. Advanced Topics in Evolution

Topics of current research interest in plant or animal evolution. May be repeated for credit as topics change. (2 units)

690. Graduate Seminar in Biology

Selected topics and reviews of current investigations in the fields of biology. Required of all graduate students in biology. May be repeated for credit as topics change. (2 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the Master of Science degree. Students enrolled in this course have full use of university facilities. To retain their classified standing in the master's program, students enrolled in this course must attend the Biology Department colloquium called by the department chair each quarter until their projects are completed and their theses accepted. (0 units)

699. Thesis Research and Thesis

Independent graduate research conducted under guidance of the major advisor and resulting in a thesis. Biology 699A, 699B, and 699C must be completed for a total of 9 units. To retain their classified standing in the master's program, students enrolled in this course must attend the Biology Department colloquium called by the department chair each quarter until their projects are completed and their theses accepted. *Prerequisite: advancement to candidacy.*

A. (3 units)

B. (3 units)

C. (3 units)

BUSINESS ADMINISTRATION

*Accredited by the American Assembly of Collegiate
Schools of Business*

Master of Business Administration

with concentrations in:

- Finance
- Management and Human Resources
- Information Management
- Marketing Management
- Production and Operations Management
- Professional Accounting

School of Business and Public Administration

Jack Brown Hall, Room 282
880-5703

MASTER OF BUSINESS ADMINISTRATION

Requirements (48 units)

The Master of Business Administration (M.B.A.) is a broad program designed to provide flexibility for the student to prepare for a career in administration in the private sector. The major objectives are to provide the student with the tools of decision-making, an understanding of the total administrative system, a capability for understanding interrelationships, and specialized training in a functional field of administration.

The program is open to all qualified students, regardless of undergraduate major. Students who do not have a background in the area of business administration can obtain this required capability by completing designated prerequisite courses or through individual study with competency demonstrated through credit by examination.

Admission to the M.B.A. Program

Although applications for admission to the university as a postbaccalaureate student are accepted at any time, the following schedule of dates has been established for actions by the School of Business and Public Administration in determining eligibility for classified graduate standing.

<u>Entry Quarter</u>	<u>Application Received by</u>	<u>Documents Received by</u>
Winter, 1996	Oct. 1, 1995	Oct. 31, 1995
Spring, 1996	Jan. 1, 1996	Jan. 31, 1996
Fall, 1996	July 1, 1996	July 31, 1996
Winter, 1997	Oct. 1, 1996	Oct. 30, 1996

Note: The GMAT should normally be taken 8-10 weeks prior to the application deadline to insure that the scores will be reported before the application deadline.

Applicants who apply after the deadline for a particular term and have all documents which show they meet all requirements for classified graduate standing may be admitted to conditionally classified standing. They will automati-

cally be converted to classified graduate standing during the next regular academic term. Students in this category should contact the director of graduate studies of the School of Business and Public Administration for further information.

Students who meet all entrance requirements except course prerequisites may be admitted to the program in a conditionally classified status until those prerequisite deficiencies are removed, at which time they will be advanced to classified graduate standing in the program. Only fully classified students, however, may enroll in 600-level courses unless they have written consent from the school graduate director.

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A bachelor's degree from an accredited college or university;
2. The following combination of grade point average (GPA) and test score on the GMAT (Graduate Management Admission Test): GMAT score plus 200 times grade point average on the last 90 sequential quarter units (60 semester units) of course work (in the B.A./B.S. degree only) equals or exceeds 1020, and the GMAT should not be less than 400;
3. Submission of GMAT score by the deadline for that term; if test result is not submitted on time, admission status will be unclassified postbaccalaureate;
4. Completion of the graduate writing requirement;
5. Competence in the following prerequisite courses or their equivalents:

A. Acct 503.	Financial and Managerial Accounting
<i>or equivalent courses:</i>	
Acct 211.	Principles of Accounting I
Acct 212.	Principles of Accounting II
B. Econ 305.	Intensive Introductory Economics
<i>or equivalent courses:</i>	
Econ 200.	Microeconomics
Econ 202.	Macroeconomics
C. Fin 503.	Financial Management Concepts
<i>or equivalent courses:</i>	
Fin 313.	Business Finance
Fin 314.	Corporate Finance
D. Info 309.	Information Management
E. Mgmt 302.	Management and Organizational Behavior
<i>or</i>	
Psyc 302.	Management and Organizational Behavior
F. Mgmt 330.	Legal Environment of Business
G. Mgmt 490.	Administrative Strategy and Policy
H. Mktg 305.	Marketing Principles
I. MSci 210.	Applied Business Statistics
J. MSci 304.	Principles of Production and Operations Management

Note: Accounting 503, Economics 305, and Finance 503 are intensive introductory courses taught at an accelerated pace and cover material otherwise available in two lower-division courses. Students who may have difficulty with accelerated courses

should consider enrolling in the individual equivalent courses. Consult the graduate director for more information.

Competence in the above prerequisite courses may be demonstrated by:

- A. Formal completion of the course or its equivalent.
 - B. Credit by examination.
 - C. Waiver based on specialized work experience; must have documentation of work directly related to course to be waived; and must be approved by the school's director of graduate studies. (Students requesting waiver of any prerequisite courses must petition the school's director of graduate studies. Inquiries about a challenge examination or substitution for Management 495 should be directed to the Dean of Graduate Studies.)
5. Academic motivation and personal qualifications demonstrated through submission of a 200-250 word statement of reasons for wishing to pursue the M.B.A. at California State University, San Bernardino, and personal qualifications that will contribute to successful completion of the program.

Advancement to Candidacy

To be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed, at least 16 quarter units of applicable graduate-level course work at the university, with a minimum grade point average of 3.0 ("B");
3. Completed an approved graduate program plan in consultation with an M.B.A. advisor after achieving conditionally classified or classified status;
4. Secured approval of the graduate director of the School of Business and Public Administration and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable graduate-level work, consistent with the program plan (with a grade point average of 3.0), with at least 36 units completed at the university;
2. At least 28 quarter units of 600-level course work;
3. At least 24 quarter units of credit taken after advancement to candidacy for the degree;
4. Successful completion of the required core courses and an elective concentration as outlined in the curriculum section;
5. A grade point average of 3.0 ("B") in all course work taken after admission to conditionally classified or classified status, and grades of "C" (2.0) or better in all courses in the program;
6. Successful completion of a comprehensive examination over the student's concentration any fall, winter or spring term after advancement to candidacy. Students will not be allowed to take the examination if grade point average is below 3.0 ("B");
7. Any additional general requirements not cited above and listed on Page 320.

Concentrations are available in finance, management and human resources, information management, marketing management, production and operations management, and

professional accounting. Prior to advancement to candidacy, a student must select one of these concentrations to be tested on through the comprehensive examination process. A "no credit" (NC) designation will be entered on the student's transcript if he/she fails the examination. Students who do not receive a passing grade on the examination on the first attempt must petition the school's director of graduate studies for permission to retake the examination. The examination will be offered fall, winter and spring quarters. Only students who are currently classified, have completed all required concentration courses, have been advanced to candidacy, have obtained approval of the graduate director and are not on probation may take the examination.

Degree Requirements (48 units)

1. Acct 606. Accounting for Managerial Decision Making (4)
or
Acct 610. Advanced Financial Accounting (4) for *Professional Accounting Concentration*
2. Fin 602. Financial Planning and Control (4)
3. Info 609. Information Management Systems (4)
4. Mgmt 601. Organization Theory and Behavior (4)
5. Mgmt 685. Corporate Policy Analysis (4)
6. Mktg 605. Marketing Management (4)
7. POM 607. Operations Management (4)

Note: In addition to the regular MBA prerequisites, students choosing the *Professional Accounting Concentration* must have taken, or demonstrate proficiency in the following courses or equivalents (normally taken in any undergraduate accounting program):

- Acct 315. Accounting Information Systems (4)
- Acct 344. Cost Accounting (4)
- Acct 372. Intermediate Accounting (4)
- Acct 373. Problem Areas in Intermediate Accounting (4)
- Acct 374. Reporting Issues in Intermediate Accounting (4)
- Acct 426. Introduction to Taxation I (4)
- Acct 440. Auditing I (4)

8. Twenty units from one of the following concentrations, chosen in consultation with an advisor:

Finance Concentration

- Fin 651. Financial Institutions and Markets (4)
- Fin 653. Investment Analysis and Portfolio Management (4)
- Fin 654. International Finance (4)
- Fin 680. Corporate Financial Strategy (4)

Four units chosen from:

- Fin 575. Internship in Finance (4)
- Fin 655. Management of Financial Institutions (4)
- Info 646. Information Management Planning (4)
- Mgmt 603. Research Methods in Administration (4)

Information Management Concentration

- Info 645. Information Resource Centers (4)
- Info 646. Information Management Planning (4)
- Info 647. Information Based Management (4)
- Info 648. Information Networking Systems (4)
- Info 650. Information Forecasting Systems (4)

Management and Human Resources Concentration

- Mgmt 640. Methods of Organizational Change (4)
- Mgmt 641. Personnel Administration (4)
- Mgmt 642. Communication and Interpersonal Processes (4)

Eight units chosen from:

- Mgmt 603. Research Methods in Administration (4)
- Mgmt 643. Organizational Design (4)
- Mgmt 644. Industrial Relations (4)
- Mgmt 650. International Management (4)
- Mgmt 670. Green Management (4)
- Mgmt 690. Advanced Topics in Management (4)

Marketing Management Concentration

- Mktg 610. Consumer and Organizational Buying Behavior (4)
- Mktg 620. Advertising Management (4)
- Mktg 640. Advanced Marketing Research (4)
- Mktg 696. Marketing Strategy (4)

Four units chosen from 500- or 600-level courses chosen in consultation with an advisor.

Production and Operations Management Concentration

- POM 611. Production/Operations Strategy (4)
- POM 613. Advanced Operations Research (4)
- POM 614. Advanced Quality Management (4)
- POM 660. Material Management and Purchasing (4)

Four units chosen from:

- POM 612. Simulation and System Analysis (4)
- POM 650. Business Forecasting (4)

Professional Accounting Concentration

- Acct 615. Controllorship (4)
- Acct 620. Advanced Auditing (4)
- Acct 625. Advanced Accounting Information Systems (4)
- Acct 628. Seminar in Tax Research (4)
- Acct 642. Contemporary Accounting Issues (4)

Students who wish to substitute up to two 300- or 400-level courses must petition the school's director of graduate studies for approval in advance; for each course approved, they will be required to enroll simultaneously in a two-unit independent study course directly related to the course selected. These independent study units cannot be applied to any graduate degree unit requirements.

The student should meet with an M.B.A. advisor upon achieving classified status to declare an area of concentration and file an approved program plan.

Students may not take more than a total of eight quarter units in any combination of School of Business and Public Administration 575, 590, 595, and 690 courses.

Only classified students (or those who have the consent of the school's director of graduate studies) may enroll in 600-level courses.

The program may not include more than 12 quarter units in transfer credit from other colleges. California State University, San Bernardino will not consider for transfer credit course work from any institution which will not accept that work in its own advanced degree program.

BETA GAMMA SIGMA

The university has an active chapter of Beta Gamma Sigma, a national organization that encourages and honors academic achievement and personal excellence in the study and practice of business. Membership is by invitation extended to undergraduate and graduate business students of high scholarship and good moral character.

Undergraduate course descriptions for Accounting, Finance, Information Management, Management, Management Science, Marketing, Production and Operations Management, and Public Administration are listed alphabetically throughout the curriculum section of the catalog.

COURSE OFFERINGS IN ACCOUNTING (Acct)

Upper Division**503. Financial and Managerial Accounting**

Intensive introduction to applied topics and techniques in financial and managerial accounting. Development and use of accounting information for external reporting purposes and management analysis, decision-making, planning and control. No credit will be awarded to students who have had Accounting 211 and 212; 306; or 311 and 312. May not be counted toward fulfilling requirements for any degree program offered by the School of Business and Public Administration. *Prerequisite: achievement of the GMAT formula score of 1020.* (4 units)

568. Accounting for Government and Not-for-Profit Organizations

Covers principles and practices of government fund accounting. Topics include governmental accounting concepts, types and structure of funds and accounts, application of generally accepted accounting principles to government and not-for-profit entities, presentation and uses of financial statements. (Also offered as Public Administration 568. Students may not receive credit for both.) *Prerequisite: Accounting 211 or 311.* (4 units)

575. Internship in Accounting

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Accounting

An intensive study of some phase of accounting to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students.

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

606. Accounting for Managerial Decision-Making

Study and application of the concepts and techniques used by management for planning and controlling business activities. *Prerequisite: Accounting 503.* (4 units)

610. Advanced Financial Accounting

A study of current issues relating to financial accounting and reporting. Recent statements of the Financial Accounting Standards Board, the Governmental Accounting Standards Board, the American Institute of Certified Public Accountants and the Securities and Exchange Commission will be examined. Students may not receive credit for both Accounting 610 and Accounting 606. *Prerequisite: Accounting 373.* (4 units)

615. Controllership

An advanced study of accounting techniques, concepts and procedures as they relate to the functions and responsibilities of the controller. Consideration of management reporting systems, planning and controlling functions, corporate allocations, transfer pricing, the general ledger data base system, departmental expense control and investment and disinvestment planning. *Prerequisite: Accounting 344.* (4 units)

620. Advanced Auditing

An advanced study of the theory and practice of auditing. Topics will include recent statements on auditing standards, ethical and legal responsibilities, internal control structure considerations, statistical sampling applications, computer-assisted auditing techniques and regulatory agency requirements. *Prerequisites: Accounting 440 and 625.* (4 units)

625. Advanced Accounting Information Systems

An in-depth study of the design and operation of accounting information systems in both mainframe and microcomputer environments. Advanced consideration of internal control and auditing of computer-based systems. Environmental, hardware and software implications for security and quality control are examined. *Prerequisite: Accounting 315.* (4 units)

628. Seminar in Tax Research

Study of applied tax research methodology, including the determination of facts and issues, the location and interpretation of authoritative tax materials, and the communication of research results. Introduction to tax policy, including the taxation of capital, the taxation of consumption vs. income, the integration of corporate shareholder tax, and other topics of current interest. *Prerequisite: Accounting 426 or consent of instructor.* (4 units)

tion of capital, the taxation of consumption vs. income, the integration of corporate shareholder tax, and other topics of current interest. *Prerequisite: Accounting 426 or consent of instructor.* (4 units)

642. Contemporary Accounting Issues

Critical examination of current thought in Accounting; the difficulty of preparing precise and universally accepted accounting principles; relationships between accounting and other business areas including economics, law, manufacturing, and international trade. Ethical, social and political influences on accounting theory and practices are discussed. *Prerequisite: Accounting 374.* (4 units)

690. Advanced Topics in Accounting

Intensive study of an advanced topic in accounting. May be repeated for credit as topics change. (4 units)

COURSE OFFERINGS IN ADMINISTRATION (Admn)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

695. Directed Graduate Studies

Graduate-level independent study for students in Interdisciplinary Master of Arts programs; to be conducted under direct supervision of a faculty member from the student's committee and, if an interdisciplinary studies major, with approval of the committee on graduate education and consent of Dean of Graduate Studies. (Credit to be arranged: 1 to 6 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the master's degree. Students enrolled in this course have full use of university facilities. *Prerequisites: advancement to candidacy and consent of department.* (0 unit)

COURSE OFFERINGS IN FINANCE (Fin)

Upper Division**503. Financial Management Concepts**

An introductory course in financial management with an emphasis on concepts, tools and strategies underlying corporate financial decision-making. Topics include techniques used by firms in procuring and allocating capital for short-term and long-term operations. No credit will be awarded to students who have had Finance 313 and 314. May not be counted toward fulfilling requirements for any degree program offered by the School of Business and Public Administration. *Prerequisites: Accounting 503 and achievement of the GMAT formula score of 1020.* (4 units)

575. Internship in Finance

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

585. Real Estate Finance

Financial aspects of real estate investment will be discussed including analysis characteristics, lending environment, financial instruments, and effective loan proposals. *Prerequisite: Finance 313 or consent of instructor.* (4 units)

590. Seminar in Finance

An intensive study of some phase of finance to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

602. Financial Planning and Control

Current developments and controversies in accounting and financial controls for government and industry. Analysis of financial management in the context of recent technological, sociological and environmental changes. *Prerequisites: Finance 313 and 314 or 503.* (4 units)

651. Financial Institutions and Markets

Analysis of financial institutions and markets. Term structure of interest rates, portfolio theory and flow-fund analysis, deposit-type intermediaries, insurance, pension funds and investment companies. *Prerequisites: Finance 313, 314 or 503.* (4 units)

653. Investment Analysis and Portfolio Management

Comprehensive introduction to the descriptive and formalized quantitative areas of security analysis and portfolio management. *Prerequisite: Finance 602.* (4 units)

654. International Finance

Study of international financial environment and problems in operation of multinational enterprises with major focus on theory and practice of foreign exchange transactions, money and capital markets, investment decisions, current asset management and comparative financial systems. *Prerequisite: Finance 602.* (4 units)

655. Management of Financial Institutions

Concepts and techniques used in management of banks, savings and loans, credit unions and finance companies. Topics include asset, liability and capital management, expense control and productivity analysis. *Prerequisite: Finance 651.* (4 units)

680. Corporate Financial Strategy

Advanced topics in the field with emphasis on formulation of financial strategy. Integrates various topics in finance including mergers and reconstruction, acquisitions, debt capacity, capital budgeting, investment policy and strategy. Includes international, social, and ethical issues. *Prerequisites: Finance 651, 653 and 654 or consent of instructor.* (4 units)

690. Advanced Topics in Finance

Intensive study of an advanced topic in finance. May be repeated for credit as topics change. (4 units)

COURSE OFFERINGS IN INFORMATION MANAGEMENT (Info)

Upper Division**575. Internship in Information Management**

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Information Management

An intensive study of some phase of information management to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

609. Information Management Systems

Advanced applications of computer and information systems in organizations. Topics include information management planning, information technologies and information based management. *Prerequisite: Information Management 309.* (4 units)

645. Information Resource Centers

An introduction to information resource centers. This course covers the topics of management, hardware and software selection, maintenance contracts, security considerations and training necessities. *Prerequisite: Information Management 609 or consent of instructor.* (4 units)

646. Information Management Planning

An introduction to the areas of information and business systems planning for top management. Covers the topics of information architecture, information resource allocation, information strategic planning and related areas. *Prerequisite: Information Management 609 or consent of instructor.* (4 units)

647. Information Based Management

Advanced theory and application of data base management in organizations. Topics include manager's need for information, elements of a data base, types of data bases, difference in data bases and information systems. *Prerequisite: Information Management 609.* (4 units)

648. Information Networking Systems

An advanced study of developing, implementing, and managing data communication systems. Topics covered include use of hardware, software, microwave, fiber optics, multiplexers and digital PBX's and the management of telecommunication resources. *Prerequisite: Information Management 609 or consent of instructor.* (4 units)

650. Information Forecasting Systems

Advanced theory and application of forecasting and decision systems in support of management. Topics include interactive modeling and spreadsheet analysis. *Prerequisite: Information Management 609.* (4 units)

690. Advanced Topics in Information Management

Intensive study of an advanced topic in information management. May be repeated for credit as topics change. (4 units)

COURSE OFFERINGS IN MANAGEMENT (Mgmt)

Upper Division**515. Small Business Consulting**

Supervised consulting assignments designed to provide meaningful business assistance to small businesses. *Prerequisites: consent of instructor and school.* (4 units)

575. Internship in Management

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Management

An intensive study of some phase of management to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

601. Organization Theory and Behavior

A critical analysis of theories for viewing organizations and an examination of the common models for understanding human behavior, including executive behavior, within the constraints of a complex social system. *Prerequisite: Management 302 or Psychology 302.* (4 units)

603. Research Methods in Administration

Principles of research design, development of research instruments, data accumulation and analysis of significant data, integrated with the use of computers in research. Critique of sample research studies from the literature and a research study conducted by the student. (Also offered as Public Administration 603. Students may not receive credit for both.) *Prerequisite: Management Science 210.* (4 units)

640. Methods of Organizational Change

Review of important change methodologies including modeling, operant conditioning, organizational behavior modification, attitude change and organization development (OD). Formerly Management 551. *Prerequisite: Management 302 or Psychology 302.* (4 units)

641. Personnel Administration

Analysis of specific areas and problems in administration of personnel systems and policies. Includes employment planning; personnel recruitment, selection and development; performance appraisal; training; compensation. *Prerequisite: Management 601.* (4 units)

642. Communication and Interpersonal Processes

Various theories of interpersonal processes and communication as they relate to organizational efficiency and effectiveness, as well as a consideration of the organization as a communication system. *Prerequisite: Management 601.* (4 units)

643. Organizational Design

Examination of organizational structure and design. Emphasis on current research and applications. *Prerequisite: Management 601.* (4 units)

644. Industrial Relations

Analysis of industrial relations systems in major industries, collective bargaining institutions, processes, legal environment and problems. (4 units)

650. International Management

Management of organizations in multinational and international environments. Emphasis on economic, political and sociocultural influences. *Prerequisite: Management 302 or Psychology 302 or Management 601 or consent of instructor.* (4 units)

670. Green Management

A critical analysis of prevailing, ecologically damaging approaches of management. Exploration of business alternatives for a sustainable economic system in harmony with the environment. (4 units)

685. Corporate Policy Analysis

Corporate policy and strategy formulation, integrating the various business functions, e.g., marketing, accounting and finance. *Prerequisites: completion of, or concurrent enrollment in, the last core course for the Master of Business Administration and consent of graduate director.* (4 units)

690. Advanced Topics in Management

Intensive study of an advanced topic in management. May be repeated for credit as topics change. (4 units)

COURSE OFFERINGS IN MANAGEMENT SCIENCE (MSci)

Upper Division**575. Internship in Management Science**

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Management Science

An intensive study of some phase of Management Science to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

690. Advanced Topics in Management Science

Intensive study of an advanced topic in management science. May be repeated for credit as topics change. (4 units)

COURSE OFFERINGS IN MARKETING (Mktg)

Upper Division**575. Internship in Marketing**

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Marketing

An intensive study of some phase of marketing to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

605. Marketing Management

Problem-solving and decision-making in marketing and the interacting effects of such factors as selling, advertising, pricing, consumer behavior and channels of distribution. *Prerequisites: Economics 305 and Marketing 305.* (4 units)

610. Consumer and Organizational Buying Behavior

Influences on the purchasing behavior of individual consumers and organizational buyers. Use of theories, concepts and research findings in management and public policy decisions. *Prerequisite: Marketing 605.* (4 units)

620. Advertising Management

Emphasis on the managerial approach to advertising in its relationship to marketing management, including consumer behavior, audience analysis, research, advertising media, appeals, campaign development, as well as legal, ethical, and international aspects of advertising. Also examines communication processes and other promotional activities. *Prerequisite: Marketing 605.* (4 units)

640. Advanced Marketing Research

Advanced study of current marketing research methods for gathering information for management decision-making including qualitative and quantitative approaches to problem definition, research design, data gathering, statistical analysis, interpreting and presenting research results for decision-making. *Prerequisites: Management Science 210 or equivalent, Marketing 605 and Mathematics 110.* (4 units)

690. Advanced Topics in Marketing

Intensive study of an advanced topic in marketing. May be repeated for credit as topics change. (4 units)

696. Marketing Strategy

A strategy planning approach to marketing management from conceptual and applications perspectives. Focus is on the strategic decision-making process supported by self-analysis and external analysis. Legal, ethical and international aspects are also considered. *Prerequisites: Marketing 605 and at least four additional units of 500- or 600-level coursework in marketing.* (4 units)

COURSE OFFERINGS IN PRODUCTION AND OPERATIONS MANAGEMENT (POM)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

Students must be fully classified or have written consent of the school graduate director to enroll in graduate level courses.

607. Operations Management

Integration and application of analytical techniques used in manufacturing and service industries. Concepts of decision models are examined for planning, control, forecasting, scheduling, and analysis within an enterprise. Formerly Management Science 607. *Prerequisite: Management Science 304.* (4 units)

611. Production/Operations Strategy

Development, implementation and integration of production and operations management strategy with business and other functional strategies of organization. Topics include: decisions involving plant location and capacity, vertical integration, organizational design for operations, system design, facilities management, productivity management, and implementation of operations strategy. Formerly Management Science 611. *Prerequisite: Production and Operations Management 607.* (4 units)

612. Simulation and System Analysis

Study of the nature and purpose of computer simulation models. Analysis of facilities systems, manufacturing, material handling, warehousing and distribution using computer simulation. Topics include data collection and analysis, random number generation, computer simulation languages, etc. *Prerequisite: Production and Operations Management 607.* (4 units)

613. Advanced Operations Research

Use of mathematical and simulation models to provide decision makers with quantitative information pertaining to complex business situations. Topics include model construction, theory and applications of linear programming, goal programming and multiattribute utility theory, dynamic programming, Markov processes and queuing. *Prerequisite: Production and Operations Management 607.* (4 units)

614. Advanced Quality Management

Technical and managerial issues for implementing total quality management. Topics include the management of quality planning, organizing, motivation and control; employee involvement teams for total quality; the quality of product design; management of quality and reliability; management of inspection and measurement. *Prerequisite: Production and Operations Management 607.* (4 units)

650. Business Forecasting

Techniques of forecasting, emphasizing model building and verification. Topics include multiple regression, classical time series analysis, exponential smoothing, seasonal models, Box Jenkins Techniques. Business cases are demonstrated and solved using the computer. *Prerequisite: Production and Operations Management 607.* (4 units)

660. Material Management and Purchasing

Study of managerial concepts and frameworks of acquisition. Conversion and distribution processes. Management of inventory control system for purchasing, analysis control of purchasing and physical distribution. Topics include supplier selection and supplier relations, price determination, foreign purchasing, public purchasing, acquisition of capital assets, strategy in purchasing, etc. *Prerequisite: Production and Operations Management 607.* (4 units)

COMPUTER SCIENCE

Master of Science in Computer Science

Department of Computer Science

Jack Brown Hall, Room 307
880-5326

FACULTY: Richard Botting, Arturo Concepcion (Director), George Georgiou, Dennis Ikenberry, Fook Liu, Josephine Mendoza, Owen Murphy (Chair), Kerstin Voigt, Tong Yu, Kay Zemoudeh

The Master of Science in Computer Science degree program provides a technically oriented post-baccalaureate scientific education for those who wish to acquire or extend their knowledge in the field of computer science. The program combines both the study of modern computer devices and their applications along with the study of the philosophical foundations which underlie the discipline.

MASTER OF SCIENCE IN COMPUTER SCIENCE

Requirements (45 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. An acceptable score on the GRE (advanced test in computer science is strongly recommended);
2. Three letters of recommendation;
3. Completion of the graduate writing requirement;
4. A statement of purpose from the student; and
5. Either A or B below:
 - A. A baccalaureate degree in computer science;
 - B. A baccalaureate degree in a related field with a cumulative grade point average of "B" (3.0) or better with no grade lower than "C+" (2.3) in a selection of program preparatory courses including:
 1. The equivalent of a one-year sequence of "Introduction to Computer Science" courses, as defined by the ACM Curriculum Committee as courses CS1 and CS2. This can be satisfied by the successful completion of:

CSci 201.	Computer Science I
CSci 202.	Computer Science II
CSci 330.	Data Structures;
 2. A course in Operating Systems, equivalent to:

CSci 460.	Operating Systems;
-----------	--------------------
 3. Courses in Digital Logic, Switching Theory and Computer Architecture, equivalent to:

CSci 310.	Digital Logic
CSci 401.	Contemporary Computer Architectures;

4. Courses in Discrete Mathematics, Linear Algebra and Probability and Statistics equivalent to:

Math 272.	Discrete Mathematics
Math 262.	Applied Statistics
Math 331.	Linear Algebra

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Secured a major advisor from the Department of Computer Science for the preparation of the thesis or the implementation of a project;
3. Completed at least 12 quarter units and no more than 20 quarter units of work applicable to the degree program as a graduate student at this university with a minimum grade point average of 3.0 ("B");
4. Submitted a formal program of graduate study prepared in consultation with and approved by the Department of Computer Science graduate committee and/or the major advisor. This program of graduate study should include an abstract to serve as a thesis research proposal for thesis option or a tentative title and description of the project for the project option;
5. Obtained final approval of the program and of the candidacy itself by the Department of Computer Science graduate committee and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 45 quarter units of acceptable graduate-level work included in the formal program with 500- and 600-level courses in computer science. No more than eight units may be earned from 500-level courses;
2. Advancement to candidacy and approval of the specific program of study;
3. A public presentation of a thesis or project;
4. Completion of a final oral examination concluded by acceptance of the thesis, for the thesis option; or satisfactory passage of the comprehensive examination and completion of the project, for the project option;
5. The program must be completed within a seven-year period. No more than seven years may elapse between the time of registration for the earliest course listed on the program and completion of all requirements for the degree;
6. A grade point average of at least 3.0 ("B") in all graduate course work fulfilling the requirements of the Master of Science in Computer Science and grades of "C" (2.0) or better in all courses in the program;
7. For the thesis option, the student will submit the written thesis in bound form to the department. For the project option, the student will submit the written software engineering documentation in bound form to the department;
8. Any additional general requirements not cited above and listed in the catalog, Page 320.

Department Graduate Committee and Major Advisor

The Department of Computer Science graduate committee consists of the graduate coordinator and two or more

faculty members from the Department of Computer Science. The committee has general supervision over the work of students progressing towards the master's degree and will determine whether students are adequately prepared for graduate study. Each new graduate student should consult with the graduate coordinator for advice in the selection of the appropriate program of graduate study.

Students must choose and be accepted by a major advisor prior to their advancement to candidacy and initiation of thesis or project. The major advisor in consultation with the student will develop a program of graduate study consisting of specific courses and acceptable thesis abstract or project proposal based on the student's interest, abilities and preparation. The major advisor will direct this research.

The program of graduate study as well as any subsequent modification of the thesis or project are subject to the approval of the Department of Computer Science graduate committee and the Dean of Graduate Studies.

Thesis Preparation, Presentation and Examination

The student must conduct a research study and, from these efforts, write a thesis acceptable to the student's thesis committee and the Dean of Graduate Studies. The student's thesis committee shall be chaired by the major advisor and two other faculty members who are chosen by the student upon consultation with the major advisor and the graduate coordinator. The thesis topic and major advisor must be included on the program of graduate study submitted with the application to candidacy, although this may be amended.

The student shall enroll in Computer Science 699 at a rate of two to six units per quarter for all contiguous academic year quarters starting from the time of advancement to candidacy until the thesis is completed and accepted. Over that period, 9 units of Computer Science 699 will count toward the degree.

The student, upon completion of the thesis, must give a public presentation of the research and stand for oral examination before the faculty made up of the thesis committee and any other faculty members who wish to attend. The student is given a maximum of five years from the time the student was advanced to candidacy to finish the degree.

Project Preparation, Presentation and Examination

The student must implement and complete a project acceptable to the student's project committee and the Dean of Graduate Studies. The student's project committee shall be chaired by the major advisor and two other faculty members who are chosen by the student with consultation with the major advisor and the graduate coordinator.

The project topic and major advisor must be included on the program of graduate study submitted with the application to candidacy, although this may be amended.

The student shall enroll in Computer Science 690 at the rate of two to five units per quarter for all contiguous academic quarters starting from the time of advancement to candidacy until the project is completed and accepted. Over that period, 5 units of Computer Science 690 will count toward the degree.

The student, upon completion of the project, must give a public presentation of the project and pass the comprehensive examination of the core courses. The student is given a maximum of five years from the time the student was advanced to candidacy to finish the degree.

Degree Requirements (45 units)

1. CSci 600. Formal Languages and Automata Theory (4)
2. CSci 610. Modern Computer Architecture (4)
3. CSci 620. Programming Languages Theory (4)
4. CSci 630. Theory of Algorithms and Their Analysis (4)
5. CSci 655. Software Engineering Concepts (4)
6. CSci 660. Operating Systems Concepts and Theory (4)
7. *Twenty-one units from one of the following options:*
 - A. Thesis Option
 1. CSci 699. Thesis (9)
 2. Twelve units of elective coursework chosen from 500- to 600-level computer science courses and deemed appropriate by the department graduate committee. Up to eight units of 500-level computer science courses may be taken.
 - B. Project Option
 1. CSci 690. Master's Project (5)
 2. Sixteen units of elective coursework chosen from 500- to 600-level computer science courses deemed appropriate by the department graduate committee. Up to eight units of 500-level computer science courses may be taken.
 3. Satisfactory passage of the comprehensive examination on the core courses (1-6 above).

COURSE OFFERINGS IN COMPUTER SCIENCE (CSci)

Upper Division

500. Introduction to Formal Languages and Automata (S)

Introduction to formal language theory. Finite state machines, regular grammars, context-free grammars, context-sensitive grammars, push-down automata, closure properties. *Prerequisite: Computer Science 331 or consent of instructor.* (4 units)

505. Introduction to Theory of Computation (F)

Deterministic and non-deterministic Turing machines, decidable and undecidable problems, complexity classes P and NP. *Prerequisite: Computer Science 331.* (4 units)

511. Expert Systems

Expert systems components, problems and applications. Knowledge bases, inference "engines," and their integration within expert systems. Tools for building expert systems, system algorithms as related to hardware, implementation languages and examples of systems in operation. *Prerequisite: Computer Science 330.* (4 units)

515. Automated Reasoning (W)

Study of deduction algorithms for expert systems and the limitations thereof, propositional calculus, quantification theory, completeness and incompleteness theorems, Hebrand-Godel computability, resolution principle, equality and inequality relations. *Prerequisite: Computer Science 331.* (4 units)

520. Advanced Computer Graphics

Advanced computer graphics concepts, theory and implementation techniques. Topics include shading models, parametric curves and surfaces, hidden edge and surface removal, and anti-aliasing. *Prerequisites: Computer Science 420, Mathematics 331 and either Mathematics 213 or 251.* (4 units)

540. System Simulation

Theory and implementation of computerized modeling. Examples will include administrative, physical and biological systems. *Prerequisite: Computer Science 330 or consent of instructor.* (4 units)

580. Advanced Data Base Systems

Advanced description: advanced study of components of general data base systems and other topics such as implementation methods, query language design, reliability, integrity, performance measures, distributed database systems and database machines. *Prerequisite: Computer Science 480.* (4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Formal Languages and Automata Theory (S)

Formal models in computer science including context free grammars, finite automata, regular expressions, pushdown automata and Turing machines. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

601. Directed Studies in Computer Science Education

Supervised study of advanced computer science topics relative to computer science education. May be repeated once for credit. *Prerequisites: admission to graduate school program, admission to graduate program in education, consent of instructor, department approval of written proposal for course project (filed in advance of term of enrollment).* (4 units)

610. Modern Computer Architecture (W)

Study of the elements and construction of advanced computer systems, including parallel systems, vector processors, network scheduling, neural networks, pipelining, array processors, and systolic arrays. Three hours lecture and two hours laboratory. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

611. VLSI Circuit Design

Fundamental design techniques for Very Large Scale Integrated (VLSI) circuits; physics of semi-conductor devices; design rules and circuit layouts; use of computer-aided design tools for design, layout and testing. Three hours lecture and two hours laboratory. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

620. Programming Languages Theory (W)

Theory of programming languages, including implementation details, the required machine and data structures needed for user interfaces, coded parallelism, distributed processing facilities, functional and object oriented programming languages. Three hours lecture and two hours laboratory. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

624. Distributed Computer Systems

Open Systems Interconnection (OSI) transport, presentation and application layers; distributed control; access methods; reliability; heterogeneity; resilience; applications in network operating systems, distributed operating systems and distributed database systems. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

625. Multiprocessor and Parallel Processing

Tightly and loosely coupled multiprocessors; interconnection network; parallel programming languages; scheduling; problem decomposition; operating systems; performance; synchronization and communication; user-interface and programming environment; multiprocessor machine programming. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

630. Theory of Algorithms and Their Analysis (F)

Algorithmic techniques, algorithm construction, algorithmic time and space complexities, properties of algorithms' taxonomic classes; survey of processing algorithms for graphs, trees, sets, and sequences; algebraic, numeric and geometric analysis techniques. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

634. Neural Networks

Theory and applications of neural networks; current developments; perceptrons; Hopfield networks; self-organizing mappings and content-addressable memories; multi-layer networks. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

640. Artificial Intelligence Theory

Knowledge representations; heuristics; theory of problem solving; adaptive systems; natural language understanding; automatic theorem proving; learning and robotics systems. Three hours lecture and two hours laboratory. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

646. Theory of Computation

Theoretical foundations of computer science; models of computation; recursive functions; Church's thesis and undecidable problems; complexity classes P, NP, CO-NP and PSPACE. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

655. Software Engineering Concepts (S)

Analyses of software requirements definitions, software systems design, implementation issues, verification and validation, and software maintenance techniques; rapid prototyping procedures; operational and transformational paradigms of software development; software engineering models and CASE tools including reverse engineering and

module re-usability concepts; applications in object-oriented programming languages. Three hours lecture and two hours laboratory. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

657. Structured Systems Analysis and Design

Systems life cycle; function and data flows; entity-relationship models; objects and life histories; requirements specification and prototypes; conceptual, essential logical, and physical designs. Three hours lecture and two hours laboratory. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

660. Operating Systems Concepts and Theory (F)

Operating system concepts and scheduling practices, including memory management, virtual machine architectures, job and task scheduling, multitasking, interrupt handling, message passing, multiprocessing, resource sharing, file systems and peripherals access scheduling; distributed processing environments and parallel processing facilities. Three hours lecture and two hours laboratory. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

670. Compiler Design Theory

Compiler design for block structures, general purpose programming languages; automatic generation of lexical analyzers and parsers; error detection and correction; code optimization. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

680. Distributed Database Management Systems

Distributed database issues including methods of data distribution, types of remote database access, concurrency management, extensions to Structured Query Language (SQL) for remote databases, cooperative processing, database machines and intelligent databases. *Prerequisite: graduate standing in computer science or consent of instructor.* (4 units)

690. Master's Project (FWS)

Independent graduate project conducted under the guidance of a major advisor; total of at least five units of Computer Science 690 must be taken in contiguous quarters. *Prerequisites: advancement to candidacy and consent of department major advisor.* (Credit to be arranged: 2 to 5 units)

695. Graduate Independent Study (FWS)

Independent graduate research in computer science. A total of four units in this course may be applied toward the M.S. degree. *Prerequisites: graduate standing in computer science, consent of instructor, and approval of a written proposal of the research by the department graduate program coordinator.* (Credit to be arranged: 2 to 4 units)

699. Thesis (FWS)

Independent graduate research conducted under the guidance of a major advisor; total of at least nine units for Computer Science 699 must be taken in contiguous quarters. *Prerequisites: advancement to candidacy and consent of department major advisor.* (Credit to be arranged: 2 to 6 units)

COUNSELING AND GUIDANCE

Master of Science in Counseling and Guidance

Department of Advanced Studies in Education

Faculty Office Building, Room 126
880-5606

FACULTY: Stephen Bowles, Susan Brotherton,
Mildred Henry, Kathryn Reilly (Coordinator),
Dwight Sweeney, Dudley Wiest

MASTER OF SCIENCE IN COUNSELING AND GUIDANCE

Requirements (72 units)

The M.S. in Counseling and Guidance is a professional program preparing students to become educational counselors. The degree program is designed to fulfill all the California State requirements for school counseling in grades K-12, so that a graduate will concurrently receive the M.S. and the California Pupil Personnel Services Credential.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. Completion of Education 495 (or its equivalent) with a grade of "B" or better;
2. Attend an Educational Counseling Program admission orientation meeting (held winter and spring quarters, as announced);
3. Completion of an admission folder as part of the course requirement for Educational Counseling 531 which will contain:
 - a. Application and statement of intent;
 - b. Statement of confidentiality and release forms;
 - c. Autobiographical statement;
 - d. Three letters of recommendation from persons having knowledge of the applicant's counseling potential;
 - e. Proof of successful completion of the CBEST;
 - f. A videotape demonstrating minimal satisfactory competence of the student's basic counseling skills;
 - g. A recommendation from the instructor (a full-time faculty member) of Educational Counseling 531 which includes an evaluation in relation to the course competencies;
 - h. Evidence of possession of professional liability insurance;
 - i. Evidence of possession of a valid California teaching credential or a Certificate of Clearance for eligibility to participate in fieldwork.
4. Completion of Educational Counseling 531 with a grade of "B" (3.0) or better;

5. Completion of an interview with two full-time Educational Counseling program faculty members to assess the candidate's desirability and competency for the counseling profession.

Upon completion of the above requirements, the student's file will be reviewed by an admission committee composed of at least three members of the Educational Counseling faculty. This committee will evaluate the admission folder and decide on the student's admission status. Students who do not meet admissions criteria will be notified of their deficiencies.

Advancement to Candidacy

In order to be formally advanced to candidacy a student must have:

1. Achieved classified graduate standing;
2. Successfully completed all prerequisite courses (Education 495 and Educational Counseling 531);
3. Completed 20 quarter units of coursework with a grade point average of 3.0 ("B"), to include Educational Counseling 619, 654 and 656;
4. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with a program advisor and approved by the chair of the Department of Advanced Studies in Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 72 quarter units of acceptable graduate-level work, with a minimum of 52 units completed in residency at this university;
2. A minimum of 25 quarter units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the degree requirements, including a minimum of a "B" in Educational Counseling 531 and 657A, a grade of "Credit" in Educational Counseling 657B, and no grade below a "C" (2.0) in all other courses in the program;
4. Successful completion of a written comprehensive examination;
5. Completion of a graduation requirement check;
6. Any additional requirements not cited above and listed on Page 320.

The written comprehensive examination is designed to test the student's knowledge of the field of counseling and guidance. The examination is offered once each quarter. Students must enroll in the examination either through the regular registration process or through the Office of Extended Education in the Open University program. The student may enroll in the examination no earlier than the last quarter in which coursework is taken. The student must be advanced to candidacy one quarter before taking the comprehensive examination. The student must complete a graduation check with the Office of Admissions and Records before permission to take the examination can be granted. Students who do not receive a passing score may petition the School of Education to retake the examination or any part of it. Students who do not receive a passing score the second time must petition the Dean of Graduate Studies to retake the exam. Approval to retake the examination may be, at any

time, contingent upon completion of additional designated courses.

The program may not include more than 18 quarter units in extension and transfer credit from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Prerequisite courses

- EClg 531. Introduction to Counseling (4)
- Educ 495. Expository Writing for Education (4) or its equivalent.

Degree Requirements (72 units)

1. EClg 601. Research Methods in Counseling (4)
2. EClg 619. Appraisal Procedures in Counseling (4)
3. EClg 632. Advanced Psychological Foundations of Education (4)
4. EClg 633. Advanced Study in Child and Adolescent Development (4)
5. EClg 650. Applied Career Counseling (4)
6. EClg 651. Professional School Counselor (4)
7. EClg 654. Legal and Ethical Issues in Counseling and Guidance (4)
8. EClg 655. Multicultural Counseling (4)
9. EClg 656. Counseling Theories and Techniques (4)
10. EClg 657A. Counseling Practicum (4)
11. EClg 657B. Counseling Practicum (4)
12. EClg 658. Consulting with Parents and Staff (4)
13. EClg 678. Theory and Practice in Group Counseling (4)
14. *Twelve units chosen from:*
 - EClg 679A. Counseling Fieldwork: Multicultural Setting (4)
 - EClg 679B. Counseling Fieldwork: Elementary School (4)
 - EClg 679C. Counseling Fieldwork: Middle School (4)
 - EClg 679D. Counseling Fieldwork: High School (4)
15. *Four units chosen from:*
 - EClg 624. Technology for School Counseling and Psychology (4)
 - EClg 659. Secondary School Career Counseling (4)
 - EClg 696. Special Topics in Counselor Education (2)
 - ESpe 635. Effective Communication with Professionals and Families (4)
16. EClg 998. Advanced Seminar in Educational Counseling (4)
17. EClg 999. Written Comprehensive Examination (0)

COURSE OFFERINGS IN EDUCATIONAL COUNSELING (EClg)

Upper Division

531. Introduction to Counseling

Experience-based introduction to counseling and its techniques. This course cannot be counted among the 48 units required in the educational counseling option in the Master of Arts program or the 72 units required in the Master of Science in Counseling and Guidance. *Prerequisite: consent of instructor.* (4 units)

542. Seminar in Educational Counseling

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

601. Research Methods in Counseling

Introduction to qualitative and quantitative research methods in counseling. Includes the reading and conduct of research and evaluation studies. (4 units)

619. Appraisal Procedures in Counseling

Individual and group measurement techniques, behavior observation skills, test interpretation, rights and responsibilities of test takers and administrators, and an introduction to personality, aptitude, achievement and career interest measurements. Includes 20 hours of related field work. *Prerequisites: Educational Counseling 531 with a grade of "B" (3.0) or better and 601 for students in the M.S. and P.P.S. credential program; Educational Counseling 531 with a grade of "B" (3.0) or better and Education 663 for students in the M.A. in Education, Educational Counseling Option.* (4 units)

632. Advanced Psychological Foundations of Education

Focuses on the interaction of the learning-teaching process. Emphasis on pertinent learning theories of general and special education, individual differences in capacities and development of learners, and evaluation of learning and instructional models. Particular attention will be paid to the education of learners with exceptionalities and inclusive classrooms. Theories of motivation and research findings with specific relevance to learning process and human development within the context of educational psychology will be examined. Special attention will be paid to positive behavior interventions and principles of classroom management. (4 units)

633. Advanced Study in Child and Adolescent Development

Recent contributions in research, practical experimentation, or theory which have important bearing upon the problems of human development; the significance of the developmental approach in working with children and youth and their impact throughout the life-span. Topics will include cognitive, social, and personality development, and will examine biological, environmental, and family influences. Includes 20 hours of supervised fieldwork. *Prerequisites: Educational Counseling 531 and 632.* (4 units)

647. Individual Testing and Case Study Techniques I

Intensive practice in administration and interpretation of the Wechsler Scales: Wechsler Preschool and Primary Scale of Intelligence, Wechsler Adult Intelligence Scale and Wechsler Intelligence Scale for Children Revised. Includes 20 hours of related fieldwork. *Prerequisite: pupil personnel services credential.* (4 units)

648. Individual Testing and Case Study Techniques II

Intensive practice in administration and interpretation of Stanford-Binet and selected personality measures with attention to integration of results in case studies. Includes 20 hours of related fieldwork. *Prerequisite: pupil personnel services credential.* (4 units)

649. Ecological Assessment and Case Study Techniques

Curriculum-based and play-based authentic assessment techniques. Use of ecological and alternative methods of assessing students and their needs. Includes 20 hours of related fieldwork. (4 units)

650. Applied Career Counseling

Overview of career counseling, career education and application of career counseling and guidance to schools, educationally related agencies and special settings. Includes 20 hours of related field work. *Prerequisites: Educational Counseling 531 and 619.* (4 units)

651. Professional School Counselor

Theory and practical applications of comprehensive school counseling programs at the elementary, middle, and high school levels. Experience-based approach to program management and guidance curriculum development. Includes 20 hours of related field work. (4 units)

652. Dynamics of Human Behavior

Theories of learning and human growth and development as related to educational issues, including normal and abnormal human growth and development as related to school behavior, and effects of racial, lifestyle, and sex stereotyping in the classroom. *Prerequisite: Educational Counseling 531 with a grade of "B" (3.0) minimum.* (4 units)

654. Legal and Ethical Issues in Counseling and Guidance

Legal and ethical constraints and considerations in the school counseling profession. Includes 20 hours of related fieldwork. (4 units)

655. Multicultural Counseling

Theory of and practical applications of counseling skills to serve multi-ethnic school populations. Analysis of differing socio-economic, racial, and social backgrounds of students. Includes 20 hours of related field work. (4 units)

656. Counseling Theories and Techniques

Theories and techniques of counseling; application to educational settings; experiential orientation. *Prerequisites: Educational Counseling 531, 632 and 652.* (4 units)

657. Counseling Practicum

- A. Supervised practice in the application of counseling skills, theories and techniques. Includes 20 hours of related fieldwork. *Prerequisites: Educational Counseling 531, 652 and 656.* (4 units)
- B. Supervised practice in counseling in a laboratory setting. Includes 20 hours of related fieldwork. Graded credit/no credit. *Prerequisites: Educational Counseling 657A and 678 with a grade of "B" or better.* (4 units)

- C. Supervised practicum in a non-school, educationally-related setting such as a community college to practice counseling theories, techniques and skills. (4 units)

658. Consulting with Parents and Staff

Theory and methods of consultation and theory with parents, teachers, and administrators and theory and methods of the supervision process. Includes 20 hours of related fieldwork. *Prerequisite: Educational Counseling 657A.* (4 units)

659. Secondary School Career Counseling

Advanced applications of career counseling, guidance, and assessment techniques for secondary schools. *Prerequisite: Educational Counseling 650.* (4 units)

660. Seminar in Development and Learning

Interdisciplinary approach in understanding cognitive, social and emotional development with emphasis on developmental patterns and implications for early childhood programs. Analysis of selected research and cross cultural studies. *Prerequisite: completion of introductory course in child development or equivalent.* (4 units)

661. Administration of Community College Student Services

Theory and practical applications of program development for student matriculation, financial aid and related services. (4 units)

662. Community College Student Development

Issues in community college student development, including adult life span development, with emphasis on topics of gender, race and age. (4 units)

663. Career Development for Community College Students

Theory and practical skills in career/life development and planning for community college students, including integration of curriculum and career-related instruction. (4 units)

664. Community College Counseling Issues

Analysis of current trends and selected topics in community college counseling: matriculation, retention of underrepresented minorities, articulation with four-year institutions, and related student services. (4 units)

665. Seminar in Adult Leadership

Methods of composing, conducting and communicating with adult groups. Emphasis on techniques for developing interest and involvement; interpreting early education concepts to parents, paraprofessionals, staff, management and community agencies. (2 units)

666. Professional Community College Counselor

Theory and practical applications of community college counseling programs. Experience-based approach to program management and guidance curriculum development. (4 units)

667. Fieldwork in Community College Counseling

Field practice with direct student contact (minimum of 120 hours) in a community college setting, under supervision of qualified personnel. *Prerequisites: Educational Counseling 661, 662, 663 and 664.* (4 units)

678. Theory and Practice of Group Counseling

Theories and techniques of group counseling in educationally-related institutions. Experientially-based. Includes 20 hours of related fieldwork. Formerly Educational Counseling 677. *Prerequisites: Educational Counseling 531, 652, 656, and 657A.* (4 units)

679. Counseling Fieldwork

Field practice with direct pupil contact (minimum 120 hours) in an educational setting under supervision of certificated personnel. Graded credit/no credit.

- A. Multicultural setting. *Prerequisites: Educational Counseling 655 and 656.* (4 units)
- B. Elementary School. *Prerequisites: Educational Counseling 657B and 679A.* (4 units)
- C. Middle School. *Prerequisites: Educational Counseling 657B and 679A.* (4 units)
- D. High School. *Prerequisites: Educational Counseling 657B and 679A.* (4 units)
- E. Educational Institution. *Prerequisites: Educational Counseling 657C and consent of instructor.* (4 units)

686. Seminar in Counseling of Children and Parents

Study of theories and techniques in counseling with parents and children. Emphasis on methodology and application of counseling skills. *Prerequisite: pupil personnel services credential.* (4 units)

687. School Psychologists as Change Agents: Theory and Practice

Organizational models, systems analysis, powers and change theories and strategies as applied to educational institutions. Includes 20 hours of required fieldwork. *Prerequisite: pupil personnel services credential.* (4 units)

689. Field Work for School Psychologists

Supervised field work for prospective school psychologists in the schools. Regular seminars and conferences required. Graded credit/no credit. *Prerequisites: pupil personnel services credential and Educational Counseling 647, 648, 660, 686; Special Education 681 and Psychology 391 or consent of instructor.*

- A. (4 units)
- B. (4 units)
- C. (4 units)

693. Special Topics in School Psychology

Selected topics in school psychology, such as professional issues, ethics and current practices, applicable State Education Codes and court decisions, use of community resources; in-service training theory and practicum. May be repeated for credit as topics change. *Prerequisites: pupil personnel services credential; Educational Counseling 647, 648, 660; Special Education 681 and Psychology 391 or consent of instructor.* (4 units)

996. Special Topics in Counselor Education

Relevant issues in counselor education. May be repeated for credit as topics change. (2 units)

998. Advanced Seminar in Educational Counseling

Small group and individual tutorial to provide summative review, final competency check and exit interview in preparation for the written comprehensive examination. Graded credit/no credit. (4 units)

CRIMINAL JUSTICE

Master of Arts in Criminal Justice

Department of Criminal Justice

Faculty Office Building, Room 144
880-5506

FACULTY: Frances Coles, Charles Fields (Chair),
Marilyn McShane, Dale Sechrest, David Shichor,
Carl Wagoner, Frank Williams

MASTER OF ARTS IN CRIMINAL JUSTICE

Requirements (45 units)

The Master of Arts in Criminal Justice is designed to serve the growing number of individuals in the criminal justice system who desire postbaccalaureate education, as well as those in more traditional public and private employment who may wish to acquire further education in criminal justice.

The degree program offers two options. One is a thesis option designed for students who intend to pursue graduate studies beyond the M.A. level and those students who have special research interests in the criminal justice system. The examination option is for those with administrative and management goals.

The program can serve a variety of student interests. It has been designed with a limited prerequisite requirement to enable students with baccalaureate degrees in related fields such as psychology, administration, anthropology or social sciences to enroll along with students with undergraduate degrees in sociology and criminal justice.

The program is intended for evening students primarily and, therefore, classes will be predominately scheduled between 4 and 10 p.m.

Admission to the M.A. Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A baccalaureate degree from an accredited college or university;
2. Completion of an undergraduate major in sociology, criminology, criminal justice, or in an allied field such as administration, psychology or social sciences, or recommendation for admission to the program by a majority of the faculty in the program. Competence in the following prerequisite areas: criminological theory, law enforcement, institutional and community corrections, law and society, and research methods;
3. Completion of the graduate writing requirement;
4. A cumulative undergraduate grade point average of at least 2.5 overall and 3.0 ("B") in the major;
5. Completion of the GRE Aptitude Test (verbal, quantitative and analytical aptitude) for evaluation by the criminal justice faculty. If the test result is not submitted in time for the entry term, admission will be conditionally classified graduate standing;

6. Submission to the criminal justice program of three letters of recommendation from individuals who are familiar with the student's academic work and potential to complete the program successfully. Letters must come directly from the writer or be included in a placement file, and will be evaluated by criminal justice faculty members.

Students who meet the general requirements of the university for admission to postbaccalaureate study but do not meet the specific requirements for admission to classified status may be admitted to the program as conditionally classified graduate students. Students enrolling in that status should consult an advisor in the criminal justice program upon admission to work out an appropriate program. With the aid of an advisor, these students may later petition for admission to classified status. The graduate committee will then consider the student's scholastic performance and other circumstances and either grant classified status, specify necessary preparatory studies, or recommend other courses of action.

Advancement to Candidacy

To be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Thesis Option: completion of all required course work except thesis
or
Non-Thesis Option: completion of all required course work except Criminal Justice 695 and Comprehensive Examination;
3. Completed all course work taken before advancement to candidacy with a minimum grade point average of 3.0 ("B");
4. Made arrangements for three faculty members, in consultation with the criminal justice graduate coordinator, to serve as the student's graduate advisory committee, with one member designated to chair the committee;
5. Submitted a formal program of graduate studies to the criminal justice graduate coordinator and the Dean of Graduate Studies as approved by the student's graduate advisory committee. This should be done no later than the end of the second quarter of graduate work.

Requirements for Graduation

1. A minimum of 45 units of acceptable graduate level work, with at least 32 quarter units completed in residence at this university. The thesis option requires 29 quarter units of 600-level courses; the non-thesis option requires 24 quarter units of 600-level courses;
2. A grade point average of at least 3.0 ("B") in all courses taken after admission to classified status;
3. Completion of course work and an acceptable thesis and final oral examination (Plan I below)
or
Completion of course work and registration in and completion of the comprehensive examination with a grade of credit (Plan II below);
4. Any additional general requirements not cited above and listed on Page 320.

Degree Requirements (45 units)

Plan I (Thesis Program)

1. CJus 550. Criminal Justice Information Systems Management (4)
2. CJus 602. Critical Issues and Criminal Justice Policy (4)
3. CJus 603. Advanced Studies in Criminal Justice Administration (4)
4. CJus 604. Advanced Techniques of Basic and Applied Research in Criminal Justice (4)
5. CJus 605. Proseminar in Criminal Justice (4)
6. CJus 630. Criminal Justice Administration and the Law (4)
7. *Twelve units of electives to be chosen from:*
 - CJus 575. Internship in Criminal Justice (no more than 4 units may be counted toward the degree) (4)
 - CJus 590. Seminar in Criminal Justice (may be repeated as topics change) (4)
 - CJus 595. Independent Study (4)
 - CJus 631. Seminar in Correctional Management (4)
 - CJus 650. Directed Area Studies in Criminal Justice (1-4)
 - PA 557. Public Sector Labor Relations (4)
 - PA 611. Public Administration Theory and Practice (4)
 - PA 662. Human Resources Management in the Public Sector (4)
 - PA 663. Public Budgeting and Finance (4)
 - PA 672. Administrative Regulation (4)
 - PA 680. Public Policy Analysis (4)
 - SW 614. Clinical Child Abuse and Neglect (4)
 - SW 616. Human Sexuality in Social Work Practice (4)
 - SW 620. Social Work with Alcohol and Drug Abuse (4)
 - SW 622. Crisis Intervention and Emergency Treatment (4)

Other courses may be allowed with consent of department.

8. CJus 699A. Thesis (3)
9. CJus 699B. Thesis (6)

Plan II (Non-Thesis Program)

1. CJus 550. Criminal Justice Information Systems Management (4)
2. CJus 602. Critical Issues and Criminal Justice Policy (4)
3. CJus 603. Advanced Studies in Criminal Justice Administration (4)
4. CJus 604. Advanced Techniques of Basic and Applied Research in Criminal Justice (4)
5. CJus 605. Proseminar in Criminal Justice (4)
6. CJus 630. Criminal Justice Administration and the Law (4)
7. *Seventeen units of electives to be chosen from:*
 - CJus 575. Internship in Criminal Justice (no more than 4 units may be counted toward the degree) (4)

- CJus 590. Seminar in Criminal Justice (may be repeated as topics change) (4)
 - CJus 595. Independent Study (4)
 - CJus 631. Seminar in Correctional Management (4)
 - CJus 650. Directed Area Studies in Criminal Justice (1-4)
 - PA 557. Public Sector Labor Relations (4)
 - PA 611. Public Administration Theory and Practice (4)
 - PA 662. Human Resources Management in the Public Sector (4)
 - PA 663. Public Budgeting and Finance (4)
 - PA 672. Administrative Regulation (4)
 - PA 680. Public Policy Analysis (4)
 - SW 614. Clinical Child Abuse and Neglect (4)
 - SW 616. Human Sexuality in Social Work Practice (4)
 - SW 620. Social Work with Alcohol and Drug Abuse (4)
 - SW 622. Crisis Intervention and Emergency Treatment (4)
- Other courses may be allowed with consent of department.
8. CJus 695. Criminal Justice Master's Project (4)
 9. Completion of Comprehensive Examination with a grade of credit.

COURSE OFFERINGS IN CRIMINAL JUSTICE (CJus)

Upper Division

541. Administrative Crime Analysis

Techniques of collecting and analyzing basic crime and police service data for administrative planning and policy. Formerly Criminal Justice 590G. *Prerequisite:* Criminal Justice 311. (4 units)

542. Investigative Crime Analysis

Methods of analyzing investigative crime data for the purpose of identifying criminal behavior systems, criminal profiling and developing theories of crime and testing. Focus on integrating data into information systems (e.g., workload analysis and link analysis). Formerly Criminal Justice 590H. (4 units)

550. Criminal Justice Information Systems Management

Analysis of existing criminal justice information systems and computer applications. Develop user applications to improve operations within and between criminal justice agencies. *Prerequisite:* Criminal Justice 311 or equivalent. (4 units)

575. Internship in Criminal Justice

Supervised work and study in private or public organizations. May be repeated once for credit at the undergraduate level. Open only to criminal justice majors. Graded credit/no credit. *Prerequisites:* consent of instructor and department. (4 units)

590. Seminar in Criminal Justice

Special topics in criminal justice. May be repeated for credit with consent of instructor as topics change. *Prerequisite:* junior, senior or graduate standing. (4 units)

595. Independent Study

In-depth research into special topics concerned with the criminal justice system utilizing readings, library and/or field research. A total of 10 units in Criminal Justice 595 may be applied toward graduation. *Prerequisites:* a minimum overall grade point average of 3.0, consent of instructor and department chair's approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken. (Credit to be arranged: 1 to 4 units)

597. Senior Honors Project

Original research in an area of criminal justice studies, culminating in a major research report receiving approval of the criminal justice faculty. Enrollment limited to students whose formal application for departmental honors is approved. (4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

602. Critical Issues and Criminal Justice Policy

Intensive study of contemporary problems that influence the development and implementation of criminal justice policy as it affects criminal justice administration and the general public. *Prerequisite:* consent of instructor. (4 units)

603. Advanced Studies in Criminal Justice Administration

Comprehensive analysis of organizational and management principles as applied to the unique functions of the criminal justice system. *Prerequisite:* consent of instructor. (4 units)

604. Advanced Techniques of Basic and Applied Research in Criminal Justice

The application of scientific methods used as a means for inquiry, description and analysis of crime and the behavior of the criminal justice system. *Prerequisite:* consent of instructor. (4 units)

605. Proseminar in Criminal Justice

Overview of contemporary research and literature across the criminal justice field. Topics will include current writings and research on crime, police, courts and corrections. (4 units)

630. Criminal Justice Administration and the Law

An examination of state and federal laws that affect administrative processes and managerial practices in criminal justice agencies. (4 units)

631. Seminar in Correctional Management

Exploration of topics in correctional administration including public opinion, civil rights, court intervention, system reform and the management of correctional personnel. (4 units)

650. Directed Area Studies in Criminal Justice

Advanced study in a specific area selected by the student with the approval of the student's committee. *Prerequisite:* consent of instructor. (Credit to be arranged: 1 to 4 units)

695. Criminal Justice Master's Project

Completion of a substantial research paper based on a field research case study or a library research project. *Prerequisites:* advancement to candidacy, completion of all other course work and consent of instructor. (4 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the Master of Arts degree. Students enrolled in this course have full use of university facilities. Continuous enrollment in this course must be maintained in order for students to retain their classified standing in the master's program after they have completed all unit requirements for the degree. Such continuous enrollment is required until all requirements for the master's degree have been satisfied. *Prerequisites:* advancement to candidacy and consent of department. (0 units)

699. Thesis

Preparation of the thesis for the Master of Arts in Criminal Justice under the direction of a faculty member from the student's committee. Criminal Justice 699B must be completed before credit will be awarded for 699A. Graded credit/no credit. *Prerequisite:* advancement to candidacy.
A. (3 units)
B. (6 units)

EDUCATION

Master of Arts in Education

with options in:

- Bilingual/Cross-Cultural
- Educational Counseling
- Elementary Education
- Environmental Education
- Instructional Technology
- Middle Grades
- Reading/Language Arts
- Secondary Education
- Secondary Education with English, History,
Physical Education, or Spanish Options
- Special Education
- Teaching English as a Second Language
- Vocational Education

Specialist and Services Credentials

- Adapted Physical Education Specialist
- Administrative Services (Preliminary)
- Administrative Services Preliminary (Internship)
- Administrative Services (Professional)
- Bilingual/Cross-Cultural Specialist
- Pupil Personnel Services
- Reading/Language Arts Specialist
- Special Education Specialist:Mild to Moderate Disabilities
- Special Education Specialist:Moderate to Severe Disabilities
- Supervision and Coordination of Designated
Subjects Programs

Certificate Programs

- Community College Counseling
- Education of the Gifted and Talented
- Educational Computing
- Educational Technology
- Environmental Education
- Language Development Specialist
- Middle School Education
- Reading/Language Arts for the Classroom Teacher
- Reading Recovery Teacher Leader
- Reading Recovery in Spanish/Descubriendo La Lectura
(DLL) Teacher Leader
- Rehabilitation Counseling
- Remedial Education in the Elementary School
- School Business Management
- Study Strategy Instruction for Secondary Schools

Specialist Certificate Program

Resource Specialist in Special Education

Also offered through the School of Education are the **Master of Arts in Educational Administration** (see Page 386); the **Master of Arts in Rehabilitation Counseling** (see Page 415); and the **Master of Science in Counseling and Guidance** (see Page 342). Information on fifth-year, clear credentials and Basic Teaching Credentials (Single Subject, Multiple Subjects and Designated Subjects) can be found on Page 138.

School of Education

*Faculty Office Building, Room 182
880-5600*

Department of Elementary and Bilingual Education
Faculty Office Building, Room 124, 880-5603

FACULTY: Billie Blair (Chair), Sam Crowell, Esteban Diaz, Lynne Diaz-Rico, Barbara Flores, Ernest Garcia (Emeritus), Richard Griffiths, Jose Hernandez, Todd Jennings, Joseph Jesunathadas, Kenneth Johns, Patricia Kelly, Ellen Kronowitz, James Mason, Patrick Mullen, Gary Negin, Ruth Norton, Iris Riggs, Sylvester Robertson, Ruth Sandlin, Rowena Santiago, Mary Jo Skillings, Sue Spitzer, Kathy Weed, Jan Woerner

Department of Secondary and Vocational Education
Faculty Office Building, Room 139, 880-5650

FACULTY: Brian Arnold, Maria Balderrama, Bonnie Brunkhorst, Herbert Brunkhorst, Renate Caine, Susan Cooper, Rosalie Giacchino-Baker, Juan Gutierrez, Francisco Hidalgo, Irvin Howard, Sherry Howie, Ron Pendleton, Robert Senour, Eleonora Sztaray, Alvin Wolf (Acting Chair), Theodore Zimmerman

Department of Advanced Studies in Education
Faculty Office Building, Room 126, 880-5606

FACULTY: Richard Ashcroft, Stephen Bowles, Susan Brotherton, Katharine Busch, William Camp (Chair), Margaret Cooney, Carolyn Eggleston, Joanne Eichinger, Cheryl Fischer, Louise Fulton, Thom Gehring, Cristina Gomez-Valdez, Rosa Gonzalez, Joseph Gray, Mildred Henry, Adria Klein, Kenneth Lane, Barbara Larivee, Marjorie McCabe, Jeff McNair, Kathryn Reilly, David Stine, Darleen Stoner, Stanley Swartz, Dwight Sweeney, Patricia Tefft Cousin, Arthur Townley, Joseph Turpin, Steven Wagner, Dudley Wiest

MASTER OF ARTS IN EDUCATION

The Master of Arts programs in elementary and secondary education developed by the university reflect the curricular and educational changes of the past decade and are designed to meet the needs of teachers who desire greater content knowledge as well as new methods of creating a child-centered educational environment. These programs seek to increase the teaching effectiveness of elementary and secondary teachers already in the classroom, to help them upgrade their skills, and to prepare them to serve as leaders in various district curriculum projects and as project directors in federally funded programs. The M.A. graduate should emerge with new skills in carrying out and evaluating educational experimentation. These options are open to individuals who hold a valid teaching credential or to applicants with teaching experience.

The M.A. in education with an emphasis on educational counseling trains individuals to work at all levels—elementary through junior college. The program, which is competency based, gives each graduate student the opportunity to acquire the specific skills needed to become an effective

counselor. An important facet of the program is to prepare individuals for cross-cultural counseling and for working with other specialized groups. Neither a credential nor teaching experience is necessary to work toward the M.A. option in educational counseling.

The M.A. in education with an option in reading/language arts meets the needs of the candidate who is interested in increasing skills in the effective teaching of reading/language arts. The program is competency based and places emphasis on the models and methods that enhance the strategic processing of language arts.

The M.A. in education with an option in bilingual/cross-cultural education is designed to give advanced training to personnel involved in bilingual programs in grades K-12. The program should also meet the needs of community college personnel who are involved in the training of classroom aides and other paraprofessionals.

The M.A. in education with an option in special education will provide advanced preparation for teaching the learning handicapped, and will provide training for those persons interested in administrative positions or leadership positions in special education.

The option in vocational education is designed to provide advanced and specialized education to personnel working in a variety of settings related to vocational education such as secondary, post-secondary and private schools. The program should also meet the requirements for leadership positions in these facilities.

The M.A. in education with an option in instructional technology is designed to meet the needs of technology professionals in schools and other education related settings, as well as business settings. The program has two emphases: video production and computer application, both planned as advanced programs for the practitioner.

M.A. IN EDUCATION (BILINGUAL/CROSSCULTURAL OPTION)

Requirements (48 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A valid teaching credential or teaching experience;
2. A grade point average of at least 2.5 in the last 90 quarter units and a 3.0 ("B") in all bilingual/cross-cultural courses. Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the School of Education. No more than 20 quarter units may be used to demonstrate fitness to complete the program;
3. Completion of the graduate writing requirement.

Advancement to Candidacy

In order to be formally advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed, with a grade point average of 3.0 ("B"), 16

quarter units of course work, at least 12 of which must have been on this campus and approved by an advisor in the School of Education;

Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.

3. Secured approval of candidacy from the School of Education;
4. Demonstrated proficiency in Spanish;
5. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable graduate-level work, with a minimum of 33 units completed in residence at this university;
2. A minimum of 23 quarter units taken after the student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements, and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of:

A. Educ 600.	Master's Degree Project and
Educ 610.	Research Methodology in Education
OR	
B. Educ 600.	Master's Degree Project and
ESpe 644.	Problems in Educational Assessment
5. A minimum of 26 units in courses numbered 600 or above included as part of the approved program;
6. Any additional general requirements not cited above and listed on Page 320.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project.

Students must register for Education 600 and 610 or Special Education 644 and these units must be part of the required 48 units.

Students will be encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to the traditional forms. All projects will be planned in consultation with the student's advisor.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (48 units)

1. Educ 600. Master's Degree Project (4)
2. Educ 603. Effective Communication in Education (4)
3. Educ 663. Introduction to Educational Research (4)
4. Educ 695. Foundations of Education (4)
5. EEIB 606. Theory and Practice in Teaching Bilingual Students (4)
6. EEIB 607. Theory and Practice in Teaching English as a Second Language (4)
7. EEIB 608. Research in Bilingual/Cross-Cultural Education (4)
8. EEIB 612. Social and Cultural Foundations for Language Learning (4)
9. EEIB 613. Cognition and Language Acquisition (4)
10. *Four units chosen from:*
 - EEIB 679B. Fieldwork: Bilingual Education (4) (for teachers currently employed)
 - EEIB 680B. Practicum: Bilingual Education (4) (for teachers not currently employed)
11. *Eight units of electives chosen from:*
 - Anth 460. Language and Culture (4)
 - Art 328. Mexican Art (4)
 - Art 329. Chicano Art (4)
 - ECIg 655. Multicultural Counseling (4)
 - EEIB 604A. Advanced Curricular Studies in Elementary Education: Mathematics (2)
 - EEIB 604B. Advanced Curricular Studies in Elementary Education: Science (2)
 - EEIB 604C. Advanced Curricular Studies in Elementary Education: Social Studies (2)
 - EEIB 604D. Advanced Curricular Studies in Elementary Education: Language Arts (2)
 - EEIB 604E. Advanced Curricular Studies in Elementary Education: Fine Arts (2)
 - EEIB 604F. Advanced Curricular Studies in Elementary Education: Computers (2)
 - Hist 390. History of Modern Mexico (4)
 - Hist 391. Chicano History (4)
 - Hist 565. Ethnic Minorities in American History (4)
 - Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
 - Hum 460. Cultural Studies (4)
 - IS 460. Aspects of Chicano Culture (4)
 - Mus 351. Latin American Music (4)
 - PSci 352. Minority Politics (4)
 - Psyc 345. Cross-Cultural Psychology (4)
 - Soc 342. The Chicano Family (4)
 - Soc 410. Racial and Cultural Minorities (4)
 - Span 415. Comparative Linguistics: Spanish/English (4)
 - Span 440. Mexican Literature (4)

M.A. IN EDUCATION (EDUCATIONAL COUNSELING OPTION)

Requirements (48 units)

The M.A. in Education, Educational Counseling Option, is designed for graduate students who do not wish to become school counselors but who desire to counsel in educationally related institutions. With an emphasis on counseling and helping skills, the program trains counselors for public or private institutions of higher education, or government or community service organizations.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. Completion of Education 495 (or its equivalent) with a grade of "B" or better;
2. Attend an Educational Counseling Program admission orientation meeting (held winter and spring quarters as announced);
3. Completion of an admission folder as part of the course requirements for Educational Counseling 531 which will contain:
 - a. Application and statement of intent;
 - b. Statement of confidentiality and release forms;
 - c. Autobiographical statement;
 - d. Three letters of recommendation from persons having knowledge of the applicant's counseling potential;
 - e. A videotape demonstrating minimal satisfactory competence of the student's basic counseling skills;
 - f. A recommendation from the instructor (a full-time faculty member) of Educational Counseling 531 which includes an evaluation in relation to the course competencies;
 - g. Evidence of possession of professional liability insurance; and
 - h. Evidence of possession of a valid California teaching credential or a Certificate of Clearance for eligibility to participate in fieldwork;
4. Completion of Educational Counseling 531 with a grade of "B" (3.0) or better;
5. Completion of an interview with two full-time Educational Counseling program faculty members to assess the candidate's desirability and competency for the counseling profession.

Upon completion of the above requirements, the student's file will be reviewed by an admission committee composed of at least three faculty members of the Educational Counseling program. This committee will evaluate the admission folder and decide on the student's admission status. Students who do not meet admissions criteria will be notified of their deficiencies.

Advancement to Candidacy

In order to be formally advanced to candidacy a student must have:

1. Achieved classified graduate standing;
2. Successfully completed all prerequisite courses (Education 495 and Educational Counseling 531);
3. Completed 20 quarter units of coursework with a grade point average of 3.0 ("B"), to include Educational Counseling 619, 632, 654 and 656;
4. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with a program advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable graduate-level work, with a minimum of 35 units completed in residency at this university;
2. A minimum of 25 quarter units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the degree requirements, including a minimum grade of "B" (3.0) in Educational Counseling 531 and 657C and no grade lower than a "C" (2.0) in all other courses in the program;
4. Successful completion of a written comprehensive examination;
5. Completion of a graduation requirement check;
6. Any additional general requirements not cited above and listed on Page 320.

The written comprehensive examination is designed to test the student's knowledge of the field of counseling and guidance. The examination is offered once each quarter. Students must enroll in the examination either through the regular registration process or through the Office of Extended Education in the Open University program. The student may enroll in the examination no earlier than the last quarter in which course work is taken. The student must be advanced to candidacy one quarter before taking the comprehensive examination. The student must complete a graduation check with the Office of Admissions and Records before permission to take the examination can be granted. Students who do not receive a passing score may petition the School of Education to retake the examination or any part of it. Students who do not receive a passing score the second time must petition the Dean of Graduate Studies to take it again. Approval to retake the examination may be, at any time, contingent upon completion of additional designated courses.

The program may not include more than 13 quarter units in extension and transfer credit from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Prerequisite courses:

- ECIlg 531. Introduction to Counseling (4)
Educ 495. Expository Writing for Education (4) (or its equivalent)

Degree Requirements (48 units)

1. ECIlg 619. Appraisal Procedures in Counseling (4)
2. ECIlg 632. Advanced Psychological Foundations of Education (4)
3. ECIlg 654. Legal and Ethical Issues in Counseling and Guidance (4)
4. ECIlg 655. Multicultural Counseling (4)
5. ECIlg 656. Counseling Theories and Techniques (4)
6. ECIlg 657C. Counseling Practicum (4)
7. ECIlg 678. Theory and Practice in Group Counseling (4)
8. ECIlg 679E. Counseling Fieldwork: Educational Institutions (4)
9. Educ 603. Effective Communication in Education (4)
10. Educ 663. Introduction to Educational Research (4)
11. Educ 695. Foundations of Education (4)
12. Educ 998. Advanced Seminar in Educational Counseling (4)
13. ECIlg 999. Written Comprehensive Examination (0)

M.A. IN EDUCATION (ELEMENTARY EDUCATION OPTION)

Requirements (46 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A valid teaching credential or teaching experience;
2. A cumulative grade point average of 3.0 ("B") in all courses taken in education;
3. Completion of the graduate writing requirement;
4. Acceptance by the Graduate Admissions Committee.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the School of Education. No more than 20 quarter units may be used to demonstrate fitness to complete the program.

Advancement to Candidacy

In order to be formally advanced to candidacy, a student must have:

1. Achieved classified graduate standing;
2. Completed with a grade point average of 3.0 ("B"), at least 16 quarter units of course work in graduate standing, at least 10 of which have been taken at this campus and approved by an advisor in the School of Education;
Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.
3. Satisfactorily completed Education 603 and 695;
4. Secured approval of candidacy from the School of Education;
5. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an

advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable course work, with a minimum of 33 completed in residence at this university;
2. A minimum of 23 quarter units taken after the student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of Education 600 or the passing of a comprehensive examination in elementary education;
5. Any additional general requirements not cited above and listed on Page 320.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available from the School of Education and the Office of the Dean of Graduate Studies regarding an approved format for the project proposal and project. Students who elect to complete a project are not required to take a comprehensive examination in elementary education.

Students who elect to complete a project must register for Education 600; these units must be part of the required 46 units.

Students will be encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to traditional forms. All projects will be planned in consultation with the student's Master's Project Committee which comprises the student's first and second readers.

The comprehensive examination is of an integrative nature and is designed to test the student's knowledge of the field of elementary education, rather than subject matter of courses taken. The examination is offered once each quarter. The comprehensive examination comprises questions developed by the student's comprehensive examination committee. The comprehensive examination committee comprises the student's advisor and two additional faculty members. This committee must be formed, and all members committed to participation, prior to the student's enrollment for the examination.

Students must enroll in the examination either through the regular registration process or through the Office of Extended Education in the Open University program. The student may enroll in the examination no earlier than the last quarter in which course work is taken. The student must complete a graduation check with the Office of Admissions and Records before permission to take the examination can be granted. Students who do not receive a passing score may petition the School of Education to retake the examination or any part of it. Students who do not receive a passing score

the second time must petition the Dean of Graduate Studies to take it again. Approval to retake the examination may be, at any time, contingent upon completion of additional designated courses.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (46 units)

1. Educ 603. Effective Communication in Education (4)
2. Educ 663. Introduction to Educational Research (4)
3. Educ 695. Foundations of Education (4)
4. *Eight units chosen from:*
 EEIB 620. Advanced Educational Psychology and the Developing Child (4)
 EEIB 622. Elementary School Curriculum (4)
 EEIB 624. Advanced Teaching Strategies (4)
5. Curriculum Electives
Twelve units chosen from:
 EEIB 630. Children's Literature for the Classroom (4)
 EEIB 632. Mathematics Clinic (4)
 EEIB 634. Advanced Social Studies Methods (4)
 EEIB 636. Advanced Science Methods (4)
 ERdg 633. Comprehension through Alternate Communication Systems (4)
6. Free electives
Track A: Master's Project
 Four units of free electives beyond student's curriculum electives. These units are chosen with advisor approval and are not limited to courses within the School of Education.
Track B: Comprehensive Examination
 Ten units of free electives beyond the curriculum electives. These units are chosen with advisor approval and are not limited to courses within the School of Education.
7. Capstone
 1. EEIB 697. Implementing Educational Change (4)
Prerequisites: Completion of all core courses, required program courses and eight units Category 5.
 2. **Track A: Master's Project**
 Successful completion of a Master's Project along with the following courses:
 EEIB 698. Research and Evaluation Project Design (2)
 Educ 600. Master's Degree Project (4)
Track B: Successful completion of comprehensive examinations.

M.A. IN EDUCATION (ENVIRONMENTAL EDUCATION OPTION)

Requirements (48 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are as follows:

1. A valid teaching credential;
2. Multiple subject science methods course work or appropriate single subject methods course work;
3. Completion of the graduate writing requirement;
4. Either A or B as follows:
 - A. Academic preparation as demonstrated by completion of a lower-division course in biological science with laboratory, a lower-division course in physical science with laboratory, and one upper-division course from each of the following three categories:
 1. *Life Sciences:*
 - Biol 319. Local Flora
 - Biol 321. Evolution
 - Biol 370. Symbiosis
 - Biol 450. Ecology
 - or other approved course
 2. *Environmental Sciences:*
 - Geog 350. Conservation and Natural Resources
 - Geog 360. Climate and Vegetation
 - Geog 460. Biogeography
 - Geog 470. Hydrology and Water Resources
 - HSci 352. Environmental Health I
 - HSci 355. Health, Consumer and Environmental Law
 - or other approved course
 3. *Natural Sciences:*
 - Geol 310. Intermediate Field Studies
 - Geol 440. Geology of California
 - NSci 310. The Environment and Human Survival
 - NSci 314. Life in the Cosmos
 - NSci 320. Energy
 - NSci 351. Health and Human Ecology
 - NSci 499A. Methods and Materials in the Teaching of Natural Sciences Subjects: Teaching Biology
 - NSci 499B. Methods and Materials in the Teaching of Natural Sciences Subjects: Teaching Chemistry
 - NSci 499I. Methods and Materials in the Teaching of Natural Sciences Subjects: Teaching Physics
 - B. An undergraduate major in science;
5. In lieu of meeting all or part of requirements 1, 2, and 4 for admission to classified graduate status, applicant may apply to the environmental education option committee.

Applicant's previous course of study and/or extensive work experiences may be judged by the committee as satisfactory preparation for graduate study in environmental education.

Advancement to Candidacy

In order to be formally advanced to candidacy a student must have:

1. Achieved classified standing;
2. Completed, with a grade point average of 3.0 ("B"), 16 quarter units of course work, at least 12 of which must have been on this campus and approved by an advisor in the School of Education;

Note: Between the time of completing 15 and 23 units of applicable course work the student is required to apply for advancement to candidacy.
3. Secured approval of candidacy from the School of Education;
4. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with advisors, one from the School of Education and one from an appropriate related subject area, and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable work, with 33 completed in residence at this university;
2. A minimum of 23 units taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grade of "C" (2.0) or better in all courses in the program;
4. Successful completion of the following:
 - Educ 603. Effective Communication in Education
 - Educ 663. Introduction to Educational Research
 - Educ 695. Foundations of Education
5. Successful completion of Education 600. Master's Degree Project.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available in the M.A. Handbook available in the Coyote Bookstore.

Students will be encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation, and creative endeavors; therefore, students should not feel bound to the traditional forms. All projects will be planned in consultation with the student's advisor.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (48 units)

1. Educ 600. Master's Degree Project (4)
2. Educ 603. Effective Communication in Education (4)
3. Educ 663. Introduction to Educational Research (4)
4. Educ 695. Foundations of Education (4)
5. EEnv 635. Environmental Education in the Curriculum (4)
6. EEnv 642. Developing the Curriculum Through Outdoor Education (4)
7. EEnv 643. Community Resources for Environmental Education (4)
8. *One of the following:*
 - EEnv 670A. Topics in Environmental Education: Current Issues (2)
 - EEnv 670B. Topics in Environmental Education: Readings in Environmental Education (2)
 - EEnv 670C. Topics in Environmental Education: Outdoor Studies (2)
 - EEnv 670D. Topics in Environmental Education: Laboratory Science Applications (2)
 - EEnv 670E. Topics in Environmental Education: Language Arts Applications (2)
 - EEnv 670F. Topics in Environmental Education: Social Studies Applications (2)
 - EEnv 670G. Topics in Environmental Education: Technology Applications (2)
 - EEnv 670H. Topics in Environmental Education: Arts Applications (2)
 - EEnv 670J. Topics in Environmental Education: Environmental Ethics (2)
 - EEnv 670K. Topics in Environmental Education: Selected Topics (2)
 - EEnv 670L. Topics in Environmental Education: Nature Study Applications (2)
 - EEnv 670M. Topics in Environmental Education: Plant Study Applications (2)
 - EEnv 670N. Topics in Environmental Education: Animal Study Applications (2)
 - EEnv 670P. Topics in Environmental Education: Marine Science Applications (2)
9. EEnv 679. Fieldwork: Environmental Education (4)
10. *Fourteen units of electives, ten units of which must be taken outside the School of Education and which must include courses from each of the following three groups:*

Group A

(Requirement cannot be satisfied with units/courses previously taken to satisfy admission requirements.)

- Biol 319. Local Flora (5)
- Biol 321. Evolution (4)
- Biol 370. Symbiosis (4)
- Biol 450. Ecology (5)
- Geol 310. Intermediate Field Studies (2)
- Geol 440. Geology of California (4)
- HSci 352. Environmental Health I (4)
- HSci 451. Principles of Epidemiology (4)

or others upon consent of advisor

Group B

(Requirement cannot be satisfied with units/courses previously taken to satisfy admission requirements.)

- Geog 350. Conservation and Natural Resources (4)
- Geog 360. Climate and Vegetation (4)
- Geog 415. Urban Planning and Land Development (4)
- Geog 460. Biogeography (4)
- Geog 470. Hydrology and Water Resources (4)
- HSci 355. Health, Consumer and Environmental Law (4)

or others upon consent of advisor

Group C

(Requirement cannot be satisfied with units/courses previously taken to satisfy admission requirements.)

- EEnv 679. Fieldwork: Environmental Education (4)
- Phil 350. Ethics (4)

One of the following:

- EEIB 636. Advanced Science Methods (4)
- NSci 499A. Methods and Materials in the Teaching of Natural Sciences Subjects: Teaching Biology (4)
- NSci 499B. Methods and Materials in the Teaching of Natural Sciences Subjects: Teaching Chemistry (4)
- NSci 499I. Methods and Materials in the Teaching of Natural Sciences Subjects: Teaching Physics (4)

In addition to the units and topic taken as a required course:

- EEnv 670A. Topics in Environmental Education: Current Issues (2)
- EEnv 670B. Topics in Environmental Education: Readings in Environmental Education (2)
- EEnv 670C. Topics in Environmental Education: Outdoor Studies (2)
- EEnv 670D. Topics in Environmental Education: Laboratory Science Applications (2)
- EEnv 670E. Topics in Environmental Education: Language Arts Applications (2)
- EEnv 670F. Topics in Environmental Education: Social Studies Applications (2)
- EEnv 670G. Topics in Environmental Education: Technology Applications (2)
- EEnv 670H. Topics in Environmental Education: Arts Applications (2)
- EEnv 670J. Topics in Environmental Education: Environmental Ethics (2)
- EEnv 670K. Topics in Environmental Education: Selected Topics (2)
- EEnv 670L. Topics in Environmental Education: Nature Study Applications (2)
- EEnv 670M. Topics in Environmental Education: Plant Study Applications (2)
- EEnv 670N. Topics in Environmental Education: Animal Study Applications (2)
- EEnv 670P. Topics in Environmental Education: Marine Science Applications (2)

M.A. IN EDUCATION (INSTRUCTIONAL TECHNOLOGY OPTION)

Requirements (48 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. Teaching or appropriate work experience;
2. A cumulative grade point average of 3.0 ("B") in all upper-division courses;
3. Completion of the graduate writing requirement;
4. Three letters of recommendation, from individuals familiar with the applicant's work history or educational background;
5. Successful completion of Educational Technology 537 or equivalent.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the School of Education. No more than 20 quarter units may be used to demonstrate fitness to complete the program.

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed with a grade point average of 3.0 ("B"), at least 16 quarter units of applicable course work in graduate standing, at least 12 of which have been taken at this campus and approved by an advisor in the School of Education;

Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.

3. Satisfactorily completed Education 603, 695 and Educational Technology 546;
4. Secured approval of candidacy from the School of Education;
5. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable graduate-level work, with a minimum of 33 completed in residence at this university;
2. A minimum of 23 quarter units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;

4. Successful completion of a master's degree project. The project, part of a course or courses other than independent study, normally in the candidate's teaching area, can be reported in the form of a paper and/or other media. The project must be approved by the instructor and the advisor and submitted in the approved format. Both media and non-media projects require a final written report.

The project proposal and the project must be approved by the student's advisor and two other professors, at least one of whom must be from the School of Education regarding an approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to traditional forms. All projects will be planned in consultation with the student's advisor;

5. A minimum of 26 units in courses numbered 600 or above included as part of the approved graduate program;
6. Any additional general requirements not cited above and listed on Page 320.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (48 units)

1. Educ 603. Effective Communication in Education (4)
2. Educ 663. Introduction to Educational Research (4)
3. Educ 695. Foundations of Education (4)
4. ETec 544. Construction of Instructional Materials (4)
5. ETec 546. Computer Based Technology in Education (4)
6. ETec 547. Educational Technology (4)
7. ETec 651. Computers and Learning (4)
8. ETec 653. Developing Computer Based Instructional Materials (4)
9. One of the following emphases:
 - A. Video Productions (8 units)
 1. ETec 548. Seminar in Instructional Design (4)
 2. ETec 641. Media and Strategies in Teaching (4)
 - B. Computer Application (8 units)
 1. ETec 652. Advanced Computer Applications in Education (4)
 2. ETec 692. Practicum for Computer Resource Personnel (4)
10. *Elective (4 units) chosen from:*
 - EEIB 604F. Advanced Curricular Studies in Elementary Education: Computers (4)
 - ESpe 691D. Issues and Trends in Special Education: Educational Technologies (4)
 - ETec 621. Reading/Language Arts with Technology Integration (4)

- ETec 623. Technology in School Administration and Counseling (4)
 ETec 634. Information Systems in Education (4)
 ETec 674. Telecommunications in Education (4)
 ETec 675. Instructional Graphics (4)
 ETec 682. Interactive Multimedia (4)
 11.Educ 600. Master's Degree Project (4)

M.A. IN EDUCATION (MIDDLE GRADES OPTION)

Requirements (46 units)

Admission to the Program

In addition to the general requirements of the university specific requirements for admission to classified graduate status are:

1. A valid teaching credential or teaching experience;
2. A cumulative grade point average of 3.0 ("B") in all courses taken in education;
3. Completion of the graduate writing requirement;
4. Three letters of recommendation, one from the school where the candidate has most recently taught or is currently teaching, to be evaluated by faculty members in the program.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the Department of Secondary and Vocational Education. No more than 20 quarter units may be used to demonstrate fitness to complete the program.

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed with a grade point average of 3.0 ("B"), at least 16 quarter units of applicable course work in graduate standing, at least 12 of which have been taken at this campus and approved by an advisor in the School of Education;

Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.

3. Satisfactorily completed Education 603 and 695;
4. Secured approval of candidacy from the School of Education;
5. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable graduate-level work, with a minimum of 33 completed in residence at this university;
2. A minimum of 23 quarter units taken after the student has been advanced to candidacy for the degree;

3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of:
 - A. Education 600. Master's Degree Project
 - B. Education 663. Introduction to Educational Research

The project, part of a course or courses other than independent study, normally in the candidate's teaching area, can be reported in the form of a paper and/or other media. The project must be approved by the instructor and the advisor and submitted in the approved format;

5. A minimum of 26 units in courses numbered 600 or above included as part of the approved graduate program;
6. Any additional general requirements not cited above and listed on Page 320.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project.

Students will be encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to traditional forms. All projects will be planned in consultation with the student's advisor.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (46 units)

1. Educ 603. Effective Communication in Education (4)
2. Educ 663. Introduction to Educational Research (4)
3. Educ 695. Foundations of Education (4)
4. ESec 517. Middle Grade Curriculum and Instruction (4)
5. ESec 521. Instructional Strategies and Approaches to Middle Grade (4)
6. ESec 522. Practicum for Middle Grade Education (4)
7. ESec 602. Special Topics in Secondary Education (2)
8. ESec 623. Foundations of Middle School Education (4)

9. Electives

Ten units chosen from:

- EAdm 610. Supervision of Instruction (4)
- EAdm 619. Legal Aspects of Education (4)
- EEIB 536. Teaching in a Multicultural Society (4)
- ESec 443. Adolescent Development and Educational Contexts (4)
- ESec 515. Issues and Trends in Secondary Education (2)

- ESec 516. Models of Teaching and Advanced Teaching Methodology (4)
 ETec 537. Introduction to Computer Technology in Education (2)
 ETec 546. Computer Based Technology in Education (4)

or upper-division or graduate level electives, outside the School of Education, normally in the candidate's teaching field, selected with approval of an advisor. Students who wish to use up to two 300- or 400-level courses must petition the program coordinator for approval in advance; for each course approved, students will be required to enroll simultaneously in a two-unit independent study course directly related to the course selected. These independent study units cannot be applied to any graduate degree unit requirements.

10. Educ 600. Master's Degree Project (4)
 11. ESec 664. Project Design in Teacher Education (2)

M.A. IN EDUCATION (READING/LANGUAGE ARTS OPTION)

Requirements (46 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A valid teaching credential or teaching experience;
2. A cumulative grade point average of 3.0 ("B") in all courses taken in education;
3. Completion of the graduate writing requirement.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the School of Education. No more than 16 quarter units may be used to demonstrate fitness to complete the program.

Advancement to Candidacy

In order to be formally advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed with a grade point average of 3.0 ("B"), 12 quarter units of course work at least 8 of which must have been on this campus and approved by an advisor in the School of Education;

Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.

3. Secured approval of candidacy from the School of Education;
4. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable work, with 33 completed in residence at this university;
2. A minimum of 23 quarter units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of one of the following:
 - A. Written comprehensive examination;
 - B. Education 600. Master's Degree Project;
 - C. Reading Education 628. Special Projects in Reading. Students who elect to complete a project will register for Education 600 or Reading Education 628 and these units will be part of the required 46 units. Students who take the comprehensive examination will select, with their advisor, an appropriate elective;
5. Any additional general requirements not cited above and listed on Page 320.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available in the Master of Arts Handbook available in the Coyote Bookstore. Students who elect to complete a project are not required to take a comprehensive examination.

Students will be encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to the traditional forms. All projects will be planned in consultation with the student's advisor.

The comprehensive examination is of an integrative nature and is designed to test the student's knowledge of the field of reading/language arts rather than the subject matter of courses taken. The examination in reading/language arts is offered once each quarter. Students must enroll in the examination either through the regular registration process or through the Office of Extended Education in the Open University program. The student may enroll in the examination no earlier than the last quarter in which course work is taken. The student must complete a graduation check with the Office of Admissions and Records before permission to take the examination can be granted. Students who do not receive a passing score may petition the School of Education to retake the examination or any part of it. Students who do not receive a passing score the second time must petition the Dean of Graduate Studies to take it again. Approval to retake the examination may be, at any time, contingent upon completion of additional designated courses.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (46 units)

Master of Arts Core (12 units)

1. Educ 603. Effective Communication in Education (4)
2. Educ 663. Introduction to Educational Research (4)
3. Educ 695. Foundations of Education (4)

Reading Core (20 units)

1. ERdg 620. Approaches to Literacy (4)
Note: Reading Education 620 is a prerequisite for all courses in the program.
2. ERdg 631. Curriculum Reform in Literacy (4)
3. *Four units chosen from:*
ERdg 614. Reading Recovery Theoretical Seminar for Teacher Leaders II (4)
ERdg 615. DLL Reading Recovery Theoretical Seminar for Teacher Leaders II (4)
ERdg 632. Assessment/Evaluation in Literacy (4)
4. ERdg 641. Multicultural Perspectives and Issues of Literacy (4)
5. ERdg 658. Literacy and Language Processes (4)

Reading Electives (10 units)

Ten units chosen from:

- ERdg 612. Reading Recovery Theoretical Seminar for Teacher Leaders I (4)
- ERdg 613. DLL Reading Recovery Theoretical Seminar for Teacher Leaders I (4)
- ERdg 616. Reading Recovery Theoretical Seminar for Teacher Leaders III (4)
- ERdg 617. DLL Reading Recovery Theoretical Seminar for Teacher Leaders III (4)
- ERdg 622. Creating Occasions for Literacy Learning (4)
- ERdg 625. Practicum in Literacy (4)
- ERdg 629. Special Topics in Literacy (2)
- ERdg 633. Multi-modal Meaning Systems in Literacy (4)
- ERdg 640. Early Literacy Intervention Strategies (4)
- ERdg 642. Images of Culture through Children's Literature (4)
- EEIB 630. Children's Literature in the Classroom (4)
- ETec 621. Reading/Language Arts with Technology Integration (4)

Note: Students must be admitted to the Reading Recovery Certificate Program to take Reading Education 612, 613, 614, 615, 616, or 617.

Culminating Experience (4 units)

One of the following options: (A, B or C)

- A. Written Comprehensive Examination Option
 1. Successful completion of the written comprehensive examination.
 2. *Four units of electives chosen from (if not taken as an elective above):*
Art 395. Art in the Classroom (4)
EEIB 536. Teaching in a Multicultural Society (4)
EEIB 630. Children's Literature in the Classroom (4)
Eng 510. English in the Secondary Classroom (4)

- ERdg 622. Creating Occasions for Literacy Learning (4)
 - ERdg 624. Socio-psycholinguistics and Literacy (4)
 - ERdg 625. Practicum in Literacy (4)
 - ERdg 629. Special Topics in Literacy (2)
 - ERdg 633. Multi-modal Meaning Systems in Literacy (4)
 - ERdg 640. Early Literacy Intervention Strategies (4)
 - ERdg 642. Images of Culture through Children's Literature (4)
 - ESpe 532. Introduction to Teaching Individuals with Exceptional Needs (4)
 - ETec 621. Reading/Language Arts with Technology Integration (4)
 - ETec 641. Media and Strategies in Teaching (4)
 - TA 481. Creative Drama in the Classroom (4)
- or
other electives upon consent of advisor.

B. Master's Degree Project Option

Educ 600. Master's Degree Project (4)

C. Special Projects in Reading Option

ERdg 628. Special Projects in Reading (4)

M.A. IN EDUCATION (SECONDARY EDUCATION OPTION)

Requirements (46 units)

Admission to the Program

In addition to the general requirements of the university specific requirements for admission to classified graduate status are:

1. A valid teaching credential or teaching experience;
2. A cumulative grade point average of 3.0 ("B") in all courses taken in education;
3. Completion of the graduate writing requirement;
4. Three letters of recommendation, one from the school where the candidate has most recently taught or is currently teaching, to be evaluated by faculty members in the program.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the Department of Secondary and Vocational Education. No more than 20 quarter units may be used to demonstrate fitness to complete the program.

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed with a grade point average of 3.0 ("B"), at least 16 quarter units of applicable course work in graduate standing, at least 12 of which have been taken at this campus and approved by an advisor in the School of Education;

Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.

3. Satisfactorily completed Education 603 and 695;
4. Secured approval of candidacy from the School of Education;
5. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable graduate-level work, with a minimum of 33 completed in residence at this university;
2. A minimum of 23 quarter units taken after the student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of:
 - A. Education 600. Master's Degree Project
 - B. Education 663. Introduction to Educational Research
 The project, part of a course or courses other than independent study, normally in the candidate's teaching area, can be reported in the form of a paper and/or other media. The project must be approved by the instructor and the advisor and submitted in the approved format;
5. A minimum of 26 units in courses numbered 600 or above included as part of the approved graduate program;
6. Any additional general requirements not cited above and listed on Page 320.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project.

Students will be encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to traditional forms. All projects will be planned in consultation with the student's advisor.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (46 units)

1. Educ 600. Master's Degree Project (4)
2. Educ 603. Effective Communication in Education (4)
3. Educ 663. Introduction to Educational Research (4)
4. Educ 695. Foundations of Education (4)

5. ESec 516. Models of Teaching and Advanced Teaching Methodology (4)
6. ESec 664. Project Design in Teacher Education (2)
7. ESec 699. Secondary School Curriculum (4)
8. ESpe 644. Problems in Educational Assessment (4)
9. *Eight units of electives chosen from:*
 - EAdm 659. Legal Aspects of Education (4)
 - EELB 536. Teaching in a Multicultural Society (4)
 - ESec 443. Adolescent Development and Educational Contexts (4)
 - ESec 515. Issues and Trends in Secondary Education (2) for a total of (4)
 - ESec 517. Middle School Curriculum and Instruction (4)
 - ESec 602. Special Topics in Secondary Education (2)
 - ETec 546. Computer Based Technology in Education (4)
10. Eight units of upper-division or graduate-level electives, outside the School of Education, normally in the candidate's teaching area(s), selected with the approval of an advisor.

M.A. IN EDUCATION (SECONDARY EDUCATION OPTION WITH SPECIALIZATIONS IN ENGLISH, HISTORY, PHYSICAL EDUCATION OR SPANISH OPTIONS)

Requirements (46 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A valid teaching credential or teaching experience;
2. An undergraduate major in English, history, physical education, or Spanish;
3. Completion of the graduate writing requirement;
4. Three letters of recommendation, one from the school where the candidate has most recently taught or is currently teaching, to be evaluated by faculty members in the program.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Change to classified standing can be made only with approval of the School of Education and the Department of English, History, Physical Education or Foreign Languages. No more than 20 quarter units may be used to demonstrate fitness to complete the program.

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed at least 16 quarter units of acceptable course work at this university, with the approval of the advisors and with a minimum grade point average of 3.0 ("B"). At least 4 units must be in English, history, physical

education, or Spanish and 8 units in education;

Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.

3. Satisfactorily completed Education 603 and 695;
4. Secured the approval of candidacy from the School of Education and the Department of English, History, Physical Education or Foreign Languages;
5. Completed both the aptitude test and the advanced test in English, history or Spanish of the Graduate Record Examination or an equivalent examination with acceptable scores. No test is required for the physical education option;
6. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with advisors in the School of Education and in the Department of English, History, Physical Education, or Foreign Languages and approved by the school, the department and the Dean of Graduate Studies.

Each student will have an advisor from the School of Education and one from the Department of English, History, Physical Education or Foreign Languages. Dual signatures are necessary for registration for the initial quarter.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable graduate-level work, with 33 completed in residence at this university;
2. At least 23 quarter units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Six specified courses in education; six courses either in English, history, physical education or Spanish;
5. One project, part of an appropriate English, history, physical education or Spanish course other than independent study, which can be reported in the form of a paper or other media. The project must be approved by the instructor and the advisor and submitted in the approved format;
6. Any additional general requirements not cited above and listed on Page 320.

Students will be encouraged to use a variety of media in presenting projects. The purpose of the project requirement is for the student to communicate ideas gathered in research, experimentation and creative endeavors; therefore, students should not feel bound to traditional forms. Each project will be planned with the cooperation of the professor concerned.

The program may not include more than 13 quarter units in extension and transfer credit from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (46 units)

1. Educ 603. Effective Communication in Education (4)
2. Educ 663. Introduction to Educational Research (4)
3. Educ 695. Foundations of Education (4)
4. ESec 516. Models of Teaching and Advanced Teaching Methodology (4)

5. ESec 699. Secondary School Curriculum (4)
6. ESpe 644. Problems in Educational Assessment (4)
7. *One of the following options:*

English Option (22 units):

1. *Four units chosen from:*

- | | |
|-------------|---|
| Eng 420. | Pedagogical Grammar (4) |
| Hum 312. | Theories of Language Acquisition and Learning (4) |
| 2. Eng 510. | English in the Secondary Classroom (4) |
| 3. Eng 611. | Theory of Rhetoric and Composition (4) |
| 4. Eng 650. | Approaches to Literature (4) |
| 5. | Six units of upper-division courses in English, chosen with the English advisor's approval. |

History Option (22 units)

Choose from the following, or other upper-division or graduate level units in history substituted with the history advisor's approval:

1. Hist 500. Tudor and Stuart England (4)
2. Hist 513. Women in U.S. History (4)
3. Hist 535. Studies in European National History (4)
4. Hist 540. Constitutional History of the United States (4)
5. Hist 556. Foreign Relations of the United States (4)
6. Hist 560. History of the American West (4)
7. Hist 565. Ethnic Minorities in American History (4)
8. Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
9. Hist 589. Revolutions in History (4)
10. Hist 595B. Independent Study (2)

Physical Education Option (22 units)

1. PE 600. Graduate Seminar (2)
2. PE 623. Sport and Social Issues (4)
3. PE 624. Sport Psychology (4)
4. PE 630. Physical Education for Special Populations (4)
5. PE 670. Leadership in Physical Education (4)
6. PE 681. Exercise and Sport Science (4)

Spanish Option (22 units)

1. Span 600. Theory and Rhetoric of Composition (4)
2. Span 601. Practicum in Cultural Experience (2)
3. *Four units chosen from:*

Span 602A.	Problems in Applied Linguistics: Modern Grammar (4)
Span 602B.	Problems in Applied Linguistics: Bilingualism (4)
Span 602C.	Problems in Applied Linguistics: Discourse Analysis (4)
4. Span 603. Cultural Studies (4)
5. Span 604. Instructional Technology and Design (4)
6. Span 605. History of the Spanish Language (4)

M.A. IN EDUCATION (SPECIAL EDUCATION OPTION)

Requirements (48 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified status are:

1. A valid teaching credential or evidence of full-time teaching experience;
2. A 3.0 ("B") grade point average in all course work taken in education;
3. Completion of Special Education 530 and 620;
4. Three letters of recommendation, one from the school where the candidate has most recently taught or is currently teaching, to be evaluated by faculty members in the program;
5. Completion of the graduate writing requirement.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the School of Education. No more than 20 quarter units may be used to demonstrate fitness to complete the program.

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed the following course work in education with a 3.0 ("B") grade point average: Special Education 625, 635, 637 and 640;
Note: Upon completion of Special Education 625, 635, 637 and 640, the student is required to apply for advancement to candidacy.
3. Secured approval of candidacy from the School of Education;
4. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable work, with 35 units completed at this university;
2. A minimum of 25 quarter units of credit taken after a student has been advanced to candidacy;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of all required course work;
5. Any additional general requirements not cited above and listed on Page 320.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore,

students should not feel bound to traditional forms. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project. Students who elect to complete a project are not required to take a comprehensive examination.

The comprehensive examination is of an integrative nature and is designed to test the student's knowledge of a specific field, rather than subject matter of courses taken. The examination is offered once each quarter. Students must enroll in the examination either through the regular registration process or through the Office of Extended Education in the Open University program. The student may enroll in the examination no earlier than the last quarter in which course work is taken. The student must complete a graduation check with the Office of Admissions and Records before permission to take the examination can be granted. Students who do not receive a passing score may petition the School of Education to retake the examination or any part of it. Students who do not receive a passing score the second time must petition the Dean of Graduate Studies to take it again. Approval to retake the examination may be, at any time, contingent upon completion of additional designated courses.

The program may not include more than 13 quarter units in approved extension or transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Prerequisite courses:

1. ESpe 530. Psychology and Education of Exceptional Individuals (4)
2. ESpe 620. Classroom Management for Students with Learning and Behavior Problems (4)

Degree Requirements (48 units)

1. Educ 603. Effective Communication in Education (4)
2. Educ 663. Introduction to Educational Research (4)
3. Educ 695. Foundations of Education (4)
4. ESpe 635. Effective Communication with Professionals and Families (4)
5. ESpe 637. Assessment and Evaluation (4)
6. ESpe 640. Serious Emotional Disturbance (4)
7. ESpe 649. Curriculum and Methods in Special Education: Secondary Transition and Career/Vocational Preparation (4)
8. ESpe 660. Instructional Planning for Culturally and Ethnically Diverse Students with Special Needs (4)
9. One of the following core tracks:

Moderate to Severe Disabilities Core

- ESpe 651. Curricular Strategies for Students with Moderate to Severe Disabilities (4)
- ESpe 652. Applied Curricular Strategies for Students with Moderate to Severe Disabilities (4)

- ESpe 653. Medical, Physical and Social Aspects of Education of Learners with Moderate to Severe Disabilities (4)

Mild to Moderate Disabilities Core

- ESpe 655. Curriculum and Methods in Special Education: Language Arts (4)
 ESpe 656. Curriculum and Methods in Special Education: Core Subjects (4)
 ESpe 657. Seminar on Mild to Moderate Disabilities (4)

10. One of the following options:

- A. Master's Degree Project Option (4)
- B. Written Comprehensive Examination Option
 1. Successful completion of the written comprehensive examination.
 2. *Four units chosen from:*
 - EAdm 616. Administration of Special Services (4)
 - ESpe 542D. Seminar in Special Education (4)
 - ESpe 685. Advanced Behavior Management (4)
 - ESpe 691A. Issues and Trends in Special Education: Current Issues (4)
 - ESpe 691B. Issues and Trends in Special Education: Collaboration and Consultation (4)
 - ESpe 691C. Issues and Trends in Special Education: Early Childhood (4)
 - ESpe 691D. Issues and Trends in Special Education: Instructional Technologies (4)
 - ESpe 691E. Issues and Trends in Special Education: Administration (4)
 - ESpe 691F. Issues and Trends in Special Education: Historical (4)
 - ESpe 691G. Issues and Trends in Special Education: Special Populations (4)
 - ESpe 691H. Issues and Trends in Special Education: Transition (4)
 - ESpe 691J. Issues and Trends in Special Education: Post Secondary (4)

M.A. IN EDUCATION (TEACHING ENGLISH AS A SECOND LANGUAGE OPTION)

Requirements (48 units)

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A valid teaching credential, teaching experience, or departmental approval;
2. A cumulative grade point average of 3.0 ("B") in all courses taken in education;
3. Completion of the graduate writing requirement;
4. Three letters of recommendation, one from the school where the candidate most recently taught or is currently

teaching, to be evaluated by faculty members in the program;

5. Two years of study in any one foreign language, one year of study in any two foreign languages (at the post secondary level) or, equivalent competency as demonstrated by examination;
6. English 311. The English Language (or equivalent).

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Satisfactorily completed Education 603, 695 and 663;
Note: Between the time of completing 12 units and 19 units of applicable course work the student is required to apply for advancement to candidacy.
3. Secured approval of candidacy from the School of Education;
4. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable graduate-level work, with a minimum of 34 units completed in residence at this university;
2. A minimum of 27 units taken after the student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in all course work taken to satisfy the Master of Arts degree requirements, and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of one of the following:
 - A. Education 600. Master's Degree Project.
 A successful project is one which can be reported in the form of a paper and/or other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in the approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project.

OR

- B. Written comprehensive exam.
 The written comprehensive examination is designed to test the student's knowledge of the field of ESL instruction. The examination is offered once each quarter and during the summer session. The student may enroll in the examination no earlier than the last quarter in which course work is taken. The student may take the examination (or any part of it) three times. Approval to retake the examination may be, at any time, contingent upon completion of additional designated courses.

The program may not include more than 14 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (48 units)

1. Educ 603. Effective Communication in Education (4)
2. Educ 663. Introduction to Educational Research (4)
3. Educ 695. Foundations of Education (4)
4. EEIB 536. Teaching in a Multicultural Society (4)
5. EEIB 607. Theory and Practice in Teaching English as a Second Language (4)
6. EEIB 612. Social and Cultural Foundations for Language Learning (4)
7. EEIB 613. Cognition and Language Acquisition (4)
8. *Four units chosen from:*

For teachers currently employed:

EEIB 679A. Field Work: Teaching English as a Second Language (4)

ESEC 679A. Field Work: Teaching English as a Second Language (4)

For teachers not currently employed:

EEIB 680A. Practicum: Teaching English as a Second Language (4)

ESEC 680A. Practicum: Teaching English as a Second Language (4)

9. Eng 420. Grammar and Linguistics (4)
10. Hum 312. Theories of Language Acquisition and Learning (4)
11. *Eight units from A or B:*
- A. Educ 600. Master's Degree Project (4) plus four units of electives listed below
- B. Graduate Comprehensive Exam plus eight units of electives listed below:

Approved electives:

- Anth 331. Anthropology of Human Development (4)
- Anth 354. Cultures of Mexico and Central America (4)
- Anth 460. Language and Culture (4)
- EEIB 604D. Advanced Curricular Studies in Elementary Education: Language Arts (2)
- EEIB 606. Theory and Practice in Teaching Bilingual Students (4)
- EEIB 610. Language Assessment in the Elementary Classroom (4)
- ERdg 624. Psycholinguistics of Reading (4)
- Hist 566. Ethnic Minorities in the American Southwest: Past and Present (4)
- Hum 460. Cultural Studies (4)
- IS 460. Aspects of Chicano Culture (4)
- Soc 410. Racial and Cultural Minorities (4)
- Span 415. Comparative Linguistics: Spanish/English (4)

or other upper-division graduate courses appropriate to this concentration, subject to advance approval by the Education Graduate Committee and TESL specialist.

M.A. IN EDUCATION (VOCATIONAL EDUCATION OPTION)

Requirements (45 units)**Admission to the Program**

Applicants must possess a baccalaureate degree from an accredited college or university and a valid teaching credential. Prior to being admitted to the Master of Arts program in the School of Education, applicants must be admitted to the university as an unclassified graduate student. Application for admission to the university should be made at least three months prior to the date the applicant would like to begin taking courses.

Advancement to Candidacy

In order to be formally advanced to candidacy, applicants must have:

1. Been accepted to the School of Education as a classified graduate student;
2. Completion of the graduate writing requirement;
3. Filed an approved graduate program form for completion of the degree.

Applicants are encouraged to take Vocational Education 637 as soon as possible and to see a Master of Arts advisor before signing up for any courses.

Requirements for Graduation

1. A minimum of 45 quarter units of acceptable work, with 32 completed in residence at this university;
2. A minimum of 22 units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of a master's degree project and registration in Education 600;
5. Any additional general requirements not cited above and listed on Page 320.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project.

Students will be encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to the traditional forms. All projects will be planned in consultation with the student's advisor.

The program may not include more than 13 quarter units in approved extension and transfer courses from other colleges. California State University, San Bernardino will not consider for transfer credit course work from an institution which will not accept that work in its own advanced degree program.

Degree Requirements (45 units)

1. Educ 600. Master's Degree Project (4)
2. Educ 601. Advanced Independent Study Topics in Education (1)
3. Educ 603. Effective Communication in Education (4)
4. Educ 663. Introduction to Educational Research (4)
5. Educ 695. Foundations of Education (4)
6. EVoc 637. Foundations of Vocational Education (4)
7. EVoc 638. Critical Issues for the Professional Vocational Educator (4)
8. EVoc 639. Professional Competencies in Vocational Education (4)

9. *Sixteen units from one of the following emphasis areas (A, B, C, D, E, F, or G):*

A. Counseling

1. EClg 650. Applied Career Counseling (4)
2. Twelve units of electives approved by the candidate's advisor. This course work may also be applied (where appropriate) toward the Certificate in Rehabilitation Counseling.

OR

B. Curriculum Development

1. ESec 699. Secondary School Curriculum (4)
2. Twelve units of electives approved by the candidate's advisor.

OR

C. Educational Computing

1. ETec 546. Computer Based Technology in Education (4)
2. Twelve units of electives approved by the candidate's advisor. This course work may also be applied (where appropriate) toward the Certificate in Educational Computing.

OR

D. Educational Technology

1. ETec 544. Construction of Instructional Materials (4)
2. Twelve units of electives approved by the candidate's advisor. This course work may also be applied (where appropriate) toward the Certificate in Educational Technology.

OR

E. School Administration

1. EAdm 601. Introduction to School Administration (4)
2. Twelve units of electives approved by the candidate's advisor. This course work may also be applied (where appropriate) toward the Administrative Services (Preliminary) credential.

OR

F. Special Education

1. ESpe 530. Psychology and Education of Exceptional Individuals (4)
2. Twelve units of electives approved by the candidate's advisor.

OR

G. Supervision and Coordination

1. EVoc 508. Organization and Structure of Designated Subjects Programs (4)

2. EVoc 509. Personnel Management in Designated Subjects Programs (4)
3. EVoc 510. Field Work in Coordination and Supervision of Designated Subjects Programs (4)
4. Four units of electives approved by the candidate's advisor. This course work may also be applied (where appropriate) toward the Supervision and Coordination of Designated Subjects Program credential.

ADAPTED PHYSICAL EDUCATION SPECIALIST CREDENTIAL**Requirements (16 units)****Admission to the Program**

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the adapted physical education specialist credential program requires the following:

1. A valid California teaching credential authorizing the teaching of physical education.

Credential Requirements (16 units)*Upper-division requirements (16 units)*

1. ESpe 530. Psychology and Education of Exceptional Individuals (4)
2. PE 330. Physical Education for the Exceptional Individual (4)
3. *Eight units chosen from:*
 - PE 331A. Topics in Adapted Physical Education: Adapted aquatics (2)
 - PE 331B. Topics in Adapted Physical Education: Physically handicapped (2)
 - PE 331C. Topics in Adapted Physical Education: Learning handicapped (2)
 - PE 331D. Topics in Adapted Physical Education: Communicatively handicapped (2)
 - PE 331E. Topics in Adapted Physical Education: Severely handicapped (2)

ADMINISTRATIVE SERVICES (PRELIMINARY) CREDENTIAL**Requirements (48 units)****Admission to the Program**

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the administrative services (preliminary) credential program requires the following:

1. An application for admission to the program must be submitted;
2. A valid California teaching, pupil personnel or health services credential or evidence of eligibility for credential;
3. One year of full-time teaching; substitute teaching does not apply;

4. A 3.0 ("B") grade point average in all course work taken in education.

Recommendation for the Credential

To be eligible to be recommended for the credential, a candidate must:

1. Complete the Commission on Teacher Credentialing competencies dealing with mainstreaming of special education students;
2. Obtain a recommendation from the program committee;
3. Successfully complete the California Basic Educational Skills Test (CBEST).

Credential Requirements (48 units)

1. EAdm 601. Introduction to School Administration (4)
2. EAdm 604. The School Principalship (4)
3. EAdm 607. School Community Relations (4)
4. EAdm 610. Supervision of Instruction (4)
5. EAdm 613. School Personnel Administration (4)
6. EAdm 616. Administration of Special Programs (4)
7. EAdm 619. Legal Aspects of Education (4)
8. EAdm 622. School Curriculum (4)
9. EAdm 625. School Finance and Business Management (4)
10. EAdm 628. Fieldwork in Educational Administration (4) for a total of (8)
11. Educ 663. Introduction to Educational Research (4)

ADMINISTRATIVE SERVICES PRELIMINARY (INTERNSHIP) CREDENTIAL

Requirements (48 units)

Admission to the Program

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the administrative services (preliminary) credential program with the internship option requires the following:

1. A valid California teaching or pupil personnel or health services credential;
2. Three years of school related experience;
3. A contract between the student and the appropriate school board defining the administrative position;
4. Students agree to enroll in Educational Administration 630. Internship Fieldwork in Educational Administration, each quarter and to complete the program within two years;
5. The internship credential from the Commission for Teacher Credentialing;
6. A 3.0 ("B") grade point average in all coursework taken in education.

Recommendation for the Credential

To be eligible to be recommended for the administrative services (preliminary) credential, a candidate must:

1. Complete the Commission on Teacher Credentialing competencies dealing with mainstreaming of special education students;
2. Obtain a recommendation from the program committee;

3. Successfully complete the California Basic Educational Skills Test (CBEST);
4. Successfully complete the requirements of the internship option.

Credential Requirements (48 units)

1. EAdm 601. Introduction to School Administration (4)
2. EAdm 604. The School Principalship (4)
3. EAdm 607. School Community Relations (4)
4. EAdm 610. Supervision of Instruction (4)
5. EAdm 613. School Personnel Administration (4)
6. EAdm 616. Administration of Special Programs (4)
7. EAdm 619. Legal Aspects of Education (4)
8. EAdm 622. School Curriculum (4)
9. EAdm 625. School Finance and Business Management (4)
10. EAdm 630. Internship Fieldwork in Educational Administration (4) for a minimum of (8) up to (24)
11. EAdm 663. Introduction to Educational Research (4)

ADMINISTRATIVE SERVICES (PROFESSIONAL) CREDENTIAL PROGRAM

Requirements (36 units)

Admission to the Program

In addition to the general requirements of the university for admission as a postbaccalaureate student, admission to the professional administrative services credential program requires the following:

1. Application for admission to the program must be submitted;
2. A copy of a clear Preliminary Services Credential must be on file;
3. Verification of a Master's Degree (M.A. or M.S.);
4. Transcripts of all graduate work must be on file;
5. Verification of present employment in an administrative position;
6. A 3.0 ("B") grade point average in all graduate work;
7. An Individual Program Plan (IP) on file.

Recommendation for the Professional Credential

In order to be recommended for a credential, the student must have:

1. A minimum of two years of full-time school administrative experience in the public schools, or private schools or equivalent;
2. Completed 36 quarter units of course work, at least one-half of which shall have been enrolled in by the candidate while employed in a full-time school administrative position.

Credential Requirements (36 units)

1. EAdm 660. Advanced Field Studies: Assessment (3)
2. EAdm 664. Principles of Leadership, Organizational Theory and Decision-Making (4)
3. EAdm 667. Instructional Leadership for Program Development and Evaluation (4)
4. EAdm 670. School Law (4)

5. EAdm 672. Human Resources Management (4)
6. EAdm 675. School Business and Facility Management (4)
7. EAdm 678. Social and Political Issues in Education (4)
8. EAdm 680. Advanced Field Studies: Evaluation (3)
9. *Six units of electives chosen in consultation with advisor in the program and listed on Individual Study Plan.*

BILINGUAL/CROSSCULTURAL SPECIALIST CREDENTIAL

Requirements (44 units)

Admission to the Program

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the bilingual/cross-cultural specialist credential program requires the following:

1. A valid teaching credential or teaching experience;
2. A 3.0 ("B") grade point average in all course work taken in education and in all bilingual/cross-cultural areas;
3. Demonstration of competence in oral and written Spanish at Level 3 on the Foreign Service Institute (FSI) Proficiency Rating;
4. Written evaluations by three professors in courses taken in the program, submitted to the coordinator of the program.

Credential Requirements (44 units)

1. EEIB 536. Teaching in a Multicultural Society (4)
2. EEIB 606. Methods and Materials for Teaching Bilingual Students I (4)
3. EEIB 607. Methods and Materials for Teaching Bilingual Students II (4)
4. EEIB 608. Research in Bilingual/Cross-Cultural Education (4)
5. EEIB 679. Field Work (2) for a total of (4)
6. ESpe 644. Problems in Educational Assessment (4)
7. Hist 391. Chicano History (4)
8. IS 460. Aspects of Chicano Culture (4)
9. Span 415. Comparative Linguistics: Spanish/English (4)
10. *Eight units of electives chosen from:*
 - Anth 460. Language and Culture (4)
 - Art 328. Mexican Art (4)
 - Art 329. Chicano Art (4)
 - EEIB 604A. Advanced Curricular Studies in Elementary Education: Mathematics (2)
 - EEIB 604B. Advanced Curricular Studies in Elementary Education: Science (2)
 - EEIB 604C. Advanced Curricular Studies in Elementary Education: Social Studies (2)
 - EEIB 604D. Advanced Curricular Studies in Elementary Education: Language Arts (2)
 - EEIB 604E. Advanced Curricular Studies in Elementary Education: Fine Arts (2)
 - EEIB 604F. Advanced Curricular Studies in Elementary Education: Computers (2)
 - ERdg 624. Psycholinguistics of Reading (4)
 - FLan 320. Masterpieces of Literature (4)

- Hist 390. History of Modern Mexico (4)
- Hist 565. Ethnic Minorities in American History (4)
- Hum 460. Cultural Studies (4)
- Mus 351. Latin American Music (4)
- PSci 352. Minority Politics (4)
- Soc 410. Racial and Cultural Minorities (4)
- Soc 442. Chicano Social Stratification (4)
- Span 302. Theory and Practice in Composition (4)
- Span 440. Mexican Literature (4)

PUPIL PERSONNEL SERVICES CREDENTIAL

Requirements (64 units)

The program for the Pupil Personnel Services Credential is designed to fulfill all the requirements for the State of California to counsel in grades K-12. This 64-unit credential program is designed for students who are not enrolled in the M.S. in Counseling and Guidance program at California State University, San Bernardino, but who do hold a master's degree from another institution in a related discipline.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to the pupil personnel services credential program are:

1. Completion of Education 495 (or its equivalent) and Educational Counseling 531 with a grades of "B" or better;
2. Attend an Educational Counseling Program admission orientation meeting (held winter and spring quarters, as announced);
3. Completion of an admission folder as part of the course requirements for Educational Counseling 531 which will contain:
 - a. Application and statement of intent;
 - b. Statement of confidentiality and release forms;
 - c. Autobiographical statement;
 - d. Three letters of recommendation from persons having knowledge of the applicant's counseling potential;
 - e. Proof of successful completion of the CBEST;
 - f. A videotape demonstrating minimal satisfactory competence of student's basic counseling skills;
 - g. A recommendation from the instructor (a full-time faculty member) of Educational Counseling 531 which includes an evaluation in relation to the course competencies;
 - h. Evidence of possession of professional liability insurance; and
 - i. Evidence of possession of a valid California teaching credential **or** a Certificate of Clearance for eligibility to participate in fieldwork;
4. Completion of Educational Counseling 531 with a grade of "B" (3.0) or better;
5. Completion of an interview with two full-time Educational Counseling program faculty members to assess the candidate's desirability and competency for the counseling profession.

Upon completion of the above requirements, the student's file will be reviewed by an admission committee composed of at least three faculty members of the educational counseling program. This committee will evaluate the admission folder and decide on the student's admission status. Students who do not meet admissions criteria will be notified of their deficiencies.

Recommendation for the Credential

In order to be recommended for a credential, the student must have:

1. A minimum of 64 quarter units of acceptable graduate-level work, with a minimum of 24 units completed in residency at this university;
2. A grade point average of "B" (3.0) in the course work taken to satisfy the credentialing requirements, including a minimum grade of "B" in the prerequisite course, Educational Counseling 531, and grades of "C" (2.0) or better in all courses in the program;
3. Completion of a credential program plan of study, certified by a program advisor and the credentialing office of the university;
4. Completion of a final competency check and exit interview in conjunction with Educational Counseling 679B, 679C or 679D.

Prerequisite courses:

- | | |
|-----------|--|
| EClg 531. | Introduction to Counseling (4) |
| Educ 495. | Expository Writing for Education (4) (or its equivalent) |

Credential Requirements (64 units)

1. EClg 601. Research Methods in Counseling (4)
2. EClg 619. Appraisal Procedures in Counseling (4)
3. EClg 632. Advanced Psychological Foundations of Education (4)
4. EClg 633. Advanced Study in Child and Adolescent Development (4)
5. EClg 650. Applied Career Counseling (4)
6. EClg 651. Professional School Counselor (4)
7. EClg 654. Legal and Ethical Issues in Counseling and Guidance (4)
8. EClg 655. Multicultural Counseling (4)
9. EClg 656. Counseling Theories and Techniques (4)
10. EClg 657A. Counseling Practicum (4)
11. EClg 657B. Counseling Practicum (4)
12. EClg 658. Consulting with Parents and Staff (4)
13. EClg 678. Theory and Practice in Group Counseling (4)
14. Twelve units chosen from:

EClg 679A.	Counseling Fieldwork: Multicultural Setting (4)
EClg 679B.	Counseling Fieldwork: Elementary School (4)
EClg 679C.	Counseling Fieldwork: Middle School (4)
EClg 679D.	Counseling Fieldwork: High School (4)

READING/LANGUAGE ARTS SPECIALIST CREDENTIAL

Requirements (44 units)

Admission to the Program

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the reading specialist credential program requires the following:

1. A valid teaching credential and at least one year of teaching experience;
2. A 3.0 grade point average in all course work taken in education;
3. Three letters of recommendation: one from the candidate's school principal, and two from other professionals who can speak to the strengths of the applicant's personal qualities and professional qualifications;
4. Application (obtained at the C.A.S.E. office) which includes letter of interest, and experiences working with diverse populations of learners;
5. Interview with Reading/Language Arts Coordinator.

Recommendation for the Credential

In order to be recommended for a credential, the student must have:

1. Completed all of the prescribed course work with a grade point average of 3.0 ("B") or better;
2. Verified that all Commission on Teacher Credential Standards have been met;
3. Verified two years of full-time teaching, including the teaching of reading;
4. Obtained a letter of recommendation from the reading program faculty.

Credential Requirements (44 units)

1. ERdg 620. Approaches to Literacy (4)
Note: Reading Education 620 is a prerequisite for all courses in the program.
2. ERdg 624. Socio-psycholinguistics and Literacy (4)
3. Four units chosen from A, B or C:

A. ERdg 625.	Practicum in Literacy (4)
B. ERdg 616.	Reading Recovery Theoretical Seminar for Teacher Leaders III (4)
Educ 601B.	Advanced Independent Study Topics in Education (2)
C. ERdg 617.	DLL Reading Recovery Theoretical Seminar for Teacher Leaders III (4)
Educ 601B.	Advanced Independent Study Topics in Education (2)

 (Credit for Education 601B can be counted as an elective.)
4. ERdg 631. Curriculum Reform in Literacy (4)
5. Four units chosen from:

ERdg 614.	Reading Recovery Theoretical Seminar for Teacher Leaders II (4)
ERdg 615.	DLL Reading Recovery Theoretical Seminar for Teacher Leaders II (4)

- ERdg 632. Assessment/Evaluation in Literacy (4)
- 6. ERdg 641. Multicultural Perspectives and Issues of Literacy (4)
- 7. ERdg 658. Literacy and Language Processes (4)
- 8. ERdg 679. Field Work: Reading/Language Arts Specialist (4)
- 9. *Electives (12 units)*
Twelve units chosen from:
 - ERdg 612. Reading Recovery Theoretical Seminar for Teacher Leaders I (4)
 - ERdg 613. DLL Reading Recovery Theoretical Seminar for Teacher Leaders I (4)
 - ERdg 622. Transitions in Curriculum (4)
 - ERdg 628. Special Projects in Reading (4)
 - ERdg 629. Special Topics in Literacy (2)
 - ERdg 633. Multi-modal Meaning Systems in Literacy (4)
 - ERdg 640. Early Intervention Strategies (4)
 - ERdg 642. Images of Culture through Children's Literature (4)
 - ETec 621. Reading/Language Arts with Technology Integration (4)

Note: Students must be admitted to the Reading Recovery Certificate Program to take Reading Education 612, 613, 614, 615, 616, or 617.

SCHOOL PSYCHOLOGIST SERVICES CREDENTIAL (INTERN TRACK)

Requirements (40 units)

The School Psychologist Services Credential—Intern Track is designed to prepare school psychologists within the context of a work-based internship program. Students must complete the program during three academic quarters, enrolling in three courses plus one internship of 40 hours per week for the first quarter, and two courses plus one internship for each of the next two quarters. Students complete all internship experiences as part of a contractual employment with a local school district.

Admission to the Program

In addition to meeting the requirements of the university for admission as a postbaccalaureate student, admission to the School Psychologist Services Credential (Intern Track) requires the following:

1. An M.A. or M.S. in Counseling and Guidance or a related field;
2. A California Pupil Personnel Services Credential issued after September 30, 1991 or its equivalent;
3. Recommendations from two Educational Counseling program faculty members based on personal interviews with the applicant;
4. An application form completed by June 1 prior to a September program commencement, including:
 - a. Written endorsement and verification of employment as a School Psychology Intern from a school district or other agency of the California State Department of Education;

- b. Written endorsement from a qualified school site supervisor who will serve as on-site supervisor for the duration of the internship;
- c. Written endorsement from a qualified faculty member from the School Psychology Program who will serve as supervisor;
- d. A program plan completed by the student and faculty advisor, outlining the sequence of required courses.

Recommendation for the Credential

In order to be recommended for a credential, a student must have:

1. Completed all prescribed coursework with a grade of "B" (3.0) or better;
2. Completed all requirements for on-site internship duties as prescribed by the student's cooperating employer and the program plan.

Credential Requirements (40 units)

1. EClg 647. Individual Testing and Case Study Techniques I (4)
2. EClg 648. Individual Testing and Case Study Techniques II (4)
3. EClg 649. Ecological Assessment and Case Study Techniques (4)
4. EClg 660. Seminar in Development and Learning (4)
5. EClg 686. Seminar in Counseling of Children and Parents (4)
6. EClg 687. School Psychologists as Change Agents: Theory and Practice (4)
7. EClg 689A. Internship for School Psychologists (4)
8. EClg 689B. Internship for School Psychologists (4)
9. EClg 689C. Internship for School Psychologists (4)
10. EClg 693. Special Topics in School Psychology (4)

SPECIAL EDUCATION SPECIALIST: MILD TO MODERATE DISABILITIES CREDENTIAL

Requirements (48 units)

Admission to the Program

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the special education specialist credential program (mild to moderate disabilities) requires the following:

1. A 3.0 ("B") grade point average in all course work taken in education;
2. A valid California basic teaching credential;
3. Completion of the graduate writing requirement.

Students will receive preliminary acceptance into the credential program until they have successfully completed Level I of the credential. Once completed, students should either a) file to be formally recommended for the credential program or b) file for advancement to candidacy as an M.A. student.

Credential Requirements (48 units)**Level I**

1. ESpe 530. Psychology and Education of Exceptional Individuals (4)
2. ESpe 620. Classroom Management for Students with Learning and Behavior Problems (4)
3. ESpe 635. Effective Communication with Professionals and Families (4)
4. ESpe 637. Assessment and Evaluation (4)
5. ESpe 640. Serious Emotional Disturbance (4)
6. ESpe 679A. Special Education Fieldwork: Mild to Moderate Disabilities I (4)

Level II

1. ESpe 649. Curriculum and Methods in Special Education: Secondary Transition and Career/Vocational Preparation (4)
2. ESpe 655. Curriculum and Methods in Special Education: Language Arts (4)
3. ESpe 656. Curriculum and Methods in Special Education: Core Subjects (4)
4. ESpe 657. Seminar on Mild to Moderate Disabilities (4)
5. ESpe 660. Instructional Planning for Culturally and Ethnically Diverse Students with Special Needs (4)
6. ESpe 679B. Special Education Fieldwork: Mild to Moderate Disabilities II (4)

**SPECIAL EDUCATION SPECIALIST:
MODERATE TO SEVERE
DISABILITIES CREDENTIAL
Requirements (48 units)**

Admission to the Program

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the special education specialist credential program (moderate to severe disabilities) requires the following:

1. A 3.0 ("B") grade point average in all course work taken in education;
2. A valid California basic teaching credential;
3. Completion of the graduate writing requirement.

Students will receive preliminary acceptance into the credential program until they have successfully completed Level I of the credential. Once completed, students should either a) file to be formally recommended for the credential program, or b) file for advancement to candidacy as an M.A. student.

Credential Requirements (48 units)**Level I**

1. ESpe 530. Psychology and Education of Exceptional Individuals (4)
2. ESpe 620. Classroom Management for Students with Learning and Behavior Problems (4)
3. ESpe 635. Effective Communication with Professionals and Families (4)
4. ESpe 637. Assessment and Evaluation (4)

5. ESpe 640. Serious Emotional Disturbance (4)
6. ESpe 679C. Special Education Fieldwork: Moderate to Severe Disabilities I (4)

Level II

7. ESpe 649. Curriculum and Methods in Special Education: Secondary Transition and Career/Vocational Preparation (4)
8. ESpe 651. Curricular Strategies for Students with Moderate to Severe Disabilities (4)
9. ESpe 652. Applied Curricular Strategies for Students with Moderate to Severe Disabilities (4)
10. ESpe 653. Medical, Physical and Social Aspects of Education of Learners with Moderate to Severe Disabilities (4)
11. ESpe 660. Instructional Planning for Culturally and Ethnically Diverse Students with Special Needs (4)
12. ESpe 679D. Special Education Fieldwork: Moderate to Severe Disabilities II (4)

**SPECIAL EDUCATION SPECIALIST
(LEARNING HANDICAPPED,
SEVERELY HANDICAPPED)
INTERN CREDENTIAL PROGRAM
Requirements (68 units)**

Admission to the Program

In addition to meeting the general requirements of the university for admission as a postbaccalaureate student, admission to the Special Education Specialist Intern Credential Program requires the following:

1. A valid basic teaching credential (multiple subject, single subject, designated subjects);
2. A 3.0 ("B") grade point average in all course work taken in education;
3. Evidence of successful teaching or equivalent experience;
4. Written verification of passing score for the California Basic Educational Skills Test (CBEST);
5. Three written recommendations, including at least one from immediate supervisor;
6. Interview by a special panel of university faculty and school/district representatives.

Credential Requirements (68 units)

Completion of the following course work with a grade point average of 3.0 ("B") with no course grade lower than a "B-." Before completion of 28 units, satisfy the graduate writing requirement.

1. ESpe 529. Introductory Methods for Special Education Interns (4)
2. ESpe 530. Psychology and Education of Exceptional Individuals (4)
3. ESpe 620. Classroom Management for Students with Learning and Behavior Problems (4)
4. ESpe 635. Effective Communication with Professionals and Families (4)
5. ESpe 637. Assessment and Evaluation (4)
6. ESpe 640. Serious Emotional Disturbance (4)

7. *Twenty-four units from one of the following:*
 - ESpe 680A. Internship Fieldwork for Special Education: Learning Handicapped (4) for a total of (24)
 - ESpe 680B. Internship Fieldwork for Special Education: Severely Handicapped (4) for a total of (24)
8. ESpe 649. Curriculum and Methods in Special Education: Secondary Transition and Career/Vocational Preparation (4)
9. One of the following tracks (16 units):

Learning Handicapped (LH) (Mild/Moderate)

- ESpe 655. Curriculum and Methods in Special Education: Language Arts (4)
- ESpe 656. Curriculum and Methods in Special Education: Core Subjects (4)
- ESpe 657. Seminar on Mild to Moderate Disabilities (4)
- ESpe 660. Instructional Planning for Culturally and Ethnically Diverse Students with Special Needs (4)

Severely Handicapped (SH) (Moderate/Severe)

- ESpe 651. Curricular Strategies for Students with Moderate to Severe Disabilities (4)
- ESpe 652. Applied Curricular Strategies for Students with Moderate to Severe Disabilities (4)
- ESpe 653. Medical, Physical and Social Aspects of Education of Learners with Moderate to Severe Disabilities (4)
- ESpe 660. Instructional Planning for Culturally and Ethnically Diverse Students with Special Needs (4)

SUPERVISION AND COORDINATION OF DESIGNATED SUBJECTS PROGRAMS CREDENTIAL

Requirements (12 units)

Admission to the Program

1. Possession of, or eligibility for a "clear" designated subjects teaching credential;
2. Three years of full time teaching experience in the subject title on the teaching credential;

All applicants for this credential should contact a designated subjects credential advisor and enroll in Vocational Education 508 as soon as possible.

Credential Requirements (12 units)

1. EVoc 508. Organization and Structure of Designated Subjects Programs (4)
2. EVoc 509. Personnel Management in Designated Subjects Programs (4)
3. EVoc 510. Field Work in Coordination and Supervision of Designated Subjects Programs (4)
4. Successful completion of the California Basic Educational Skills Test (CBEST).

CERTIFICATE PROGRAMS

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Community College Counseling

Admission to the Program

1. Postbaccalaureate standing;
2. Master's Degree in Education or related field; or
3. Current employment as a community college instructor, administrator or counselor.

Certificate Requirements (24 units)

1. EClg 661. Administration of Community College Student Services (4)
2. EClg 662. Community College Student Development (4)
3. EClg 663. Career Development for Community College Students (4)
4. EClg 664. Community College Counseling Issues (4)
5. EClg 666. Professional Community College Counselor (4)
6. EClg 667. Fieldwork in Community College Counseling (4)

Certificate in Education of the Gifted and Talented

Certificate Requirements (20 units)

1. ESpe 538. Introduction to Teaching the Gifted and Talented (4)
2. ESpe 539. Programs for Teaching the Gifted and Talented (4)
3. ESpe 630A. Topics in Research in Teaching and Learning: Gifted and Talented (4)
4. ESpe 679B. Special Education Field Work: Gifted and Talented (4)
5. *Four units chosen from:*
 - ETec 546. Computer Based Technology in Education (4)
 - ETec 547. Educational Technology (4)

Certificate in Educational Computing

Certificate Requirements (20 units)

1. ETec 546. Computer Based Technology in Education (4)
2. ETec 651. Computers and Learning (4)
3. ETec 652. Advanced Computer Applications in Education (4)
4. ETec 653. Developing Computer Based Instructional Materials (4)

5. ETec 692. Practicum for Computer Resource Personnel (4)

Certificate in Educational Technology

Certificate Requirements (28 units)

1. ETec 544. Construction of Instructional Materials (4)
2. ETec 546. Computer Based Technology in Education (4)
3. ETec 547. Educational Technology (4)
4. ETec 548. Seminar in Instructional Design (4)
5. ETec 651. Computers and Learning (4)
6. *Eight units chosen from:*
 - Art 386. Audio and Video Media (4)
 - Comm 242. Writing for Print Media (4)
 - CSci 125. Programming in BASIC (2)
 - ETec 652. Advanced Computer Applications in Education (4)
 - ETec 653. Developing Computer Based Instructional Materials (4)
 - ETec 641. Media and Strategies in Teaching (4)
 - Mus 519. Audio Production (2)

Certificate in Environmental Education

Admission to the Program

1. Completion of at least 15 quarter units of undergraduate natural science course work or the equivalent.

Certificate Requirements (16 units)

1. EEnv 635. Environmental Education in the Curriculum (4)
2. *Twelve units to be chosen from:*
May choose only one of the following:
 - EEIB 636. Advanced Science Methods (4)
 - NSci 499. Methods and Materials in the Teaching of Natural Sciences Subjects (4)
- EEnv 642. Developing the Curriculum Through Outdoor Education (4)
- EEnv 643. Community Resources for Environmental Education (4)
- EEnv 670A. Topics in Environmental Education: Current Issues (2) for a total of (4)
- EEnv 670B. Topics in Environmental Education: Readings In Environmental Education (2) for a total of (4)
- EEnv 670C. Topics in Environmental Education: Outdoor Studies (2) for a total of (4)
- EEnv 670D. Topics in Environmental Education: Laboratory Science Applications (2) for a total of (4)
- EEnv 670E. Topics in Environmental Education: Language Arts Applications (2) for a total of (4)
- EEnv 670F. Topics in Environmental Education: Social Studies Applications (2) for a total of (4)
- EEnv 670G. Topics in Environmental Education: Technology Applications (2) for a total of (4)

- EEnv 670H. Topics in Environmental Education: Arts Applications (2) for a total of (4)
- EEnv 670J. Topics in Environmental Education: Environmental Ethics (2) for a total of (4)
- EEnv 670K. Topics in Environmental Education: Selected Topics (2) for a total of (4)
- EEnv 670L. Topics in Environmental Education: Nature Study Applications (2) for a total of (4)
- EEnv 670M. Topics in Environmental Education: Plant Study Applications (2) for a total of (4)
- EEnv 670N. Topics in Environmental Education: Animal Study Applications (2) for a total of (4)
- EEnv 670P. Topics in Environmental Education: Marine Science Applications (2) for a total of (4)

Certificate in Language Development Specialist

Certificate Requirements (36 units)

1. EEIB 606. Theory and Practice in Teaching Bilingual Students (4)
2. EEIB 607. Theory and Practice in Teaching English as a Second Language (4)
3. EEIB 608. Research in Bilingual/Cross-Cultural Education (4)
4. EEIB 610. Language Assessment in the Elementary Classroom (4)
5. EEIB 612. Social and Cultural Foundations for Language Learning (4)
6. EEIB 613. Cognition and Language Acquisition (4)
7. *Four units chosen from:*
 - EEIB 679A. Fieldwork: Teaching English as a Second Language (4) (for teachers currently employed)
 - EEIB 680A. Practicum: Teaching English as a Second Language (4) (for teachers not currently employed)
8. *Eight units chosen from:*
 - Educ 542D. Seminar in Education (4)
 - EEIB 536. Teaching in a Multicultural Society (4)
 - EEIB 629A. Special Topics in Elementary Education: Primary Language Literacy (4)
 - ERdg 624. Psycholinguistics of Reading (4)
 - ERdg 658. Oral and Written Language Development (4)

or other electives as approved by program coordinator.

Certificate in Middle Grade Education

Admission to the Program

1. Postbaccalaureate standing.

Certificate Requirements (16 units)

1. ESec 443. Adolescent Development and Educational Contexts (4)
2. ESec 517. Middle School Curriculum and Instruction (4)
3. ESec 521. Instructional Strategies and Approaches to Middle Grade (4)
4. ESec 522. Practicum in Middle Grade Education (4)

Certificate in Reading/Language Arts for the Classroom Teacher

Admission to the Program

1. Postbaccalaureate standing;
2. Concurrent enrollment in or completion of a multiple subject or single subject teaching credential or the equivalent.

Certificate Requirements (20 units)

1. ERdg 620. Approaches to Literacy (4)
2. ERdg 631. Curriculum Reform in Literacy (4)
3. ERdg 633. Multi-Modal Meaning Systems in Literacy (4)
4. ERdg 641. Multicultural Perspectives of Literacy (4)
5. ERdg 658. Literacy and Language Processes (4)

Note: Reading Education 620 is a prerequisite for all courses in the program.

Certificate in Reading Recovery Teacher Leader

Admission to the Program

1. Postbaccalaureate standing;
2. Master's degree in education or related field;
3. Admission into the Reading Recovery Program.

Certificate Requirements (39 units)

1. EAdv 610A. Observation and Assessment for Reading Recovery Program: Teacher Leaders (3)
2. ERdg 612. Reading Recovery Theoretical Seminar for Teacher Leaders I (4)
3. ERdg 614. Reading Recovery Theoretical Seminar for Teacher Leaders II (4)
4. ERdg 616. Reading Recovery Theoretical Seminar for Teacher Leaders III (4)
5. EAdv 618A. Clinical Implementation of Reading Recovery I: Teacher Leaders (4)
6. EAdv 620A. Clinical Implementation of Reading Recovery II: Teacher Leaders (4)
7. EAdv 622A. Clinical Implementation of Reading Recovery III: Teacher Leaders (4)
8. EAdv 679R. Fieldwork for Reading Recovery: Reading Recovery Fieldwork (4) for a total of (12)

Certificate in Reading Recovery in Spanish/Descubriendo La Lectura (DLL) Teacher Leader

Admission to the Program

1. Postbaccalaureate standing;
2. Master's degree in education or related field;
3. Admission into the Reading Recovery/DLL Program.

Certificate Requirements (39 units)

1. EAdv 611A. Observation and Assessment for DLL Reading Recovery Programs: Teacher Leaders (3)
2. ERdg 613. DLL Reading Recovery Theoretical Seminar for Teacher Leaders I (4)
3. ERdg 615. DLL Reading Recovery Theoretical Seminar for Teacher Leaders II (4)
4. ERdg 617. DLL Reading Recovery Theoretical Seminar for Teacher Leaders III (4)

5. EAdv 619A. Clinical Implementation of DLL Reading Recovery I: Teacher Leaders (4)
6. EAdv 621A. Clinical Implementation of DLL Reading Recovery II: Teacher Leaders (4)
7. EAdv 623A. Clinical Implementation of DLL Reading Recovery III: Teacher Leaders (4)
8. EAdv 679S. Fieldwork for Reading Recovery: DLL Fieldwork (4) for a total of (12)

Certificate in Rehabilitation Counseling

Certificate Requirements (28 units)

1. EC1g 531. Introduction to Counseling (4)
2. EReh 615. Introduction to Rehabilitation Counseling (4)
3. EReh 616A. Multiple Aspects of Disability: Medical (4)
4. EReh 616B. Multiple Aspects of Disability: Vocational (4)
5. EReh 617. Vocational Assessment and Development (4)
6. EReh 618. Applied Job Placement (4)
7. EReh 649. Organizational Development of Rehabilitation Services (4)

Note: Rehabilitation Counseling 615 must be completed with a grade of "B" (3.0) or better to continue work in the certificate program.

Certificate in Remedial Education in the Elementary School

The certificate in remedial education in the elementary school is for both the multiple subject and single subject teachers who wish to enhance their ability to accommodate handicapped individuals in the regular classroom. Students would be enrolled in degree-applicable catalog courses and meet the same requirements of certificate programs of this university.

Admission to the Program

1. Postbaccalaureate standing;
2. Concurrent enrollment in or completion of a multiple subject or single subject teaching credential or the equivalent.

Certificate Requirements (20 units)

1. Educ 601. Advanced Independent Study Topics in Education (1-4) for a total of (4)
2. EE1B 632. Mathematics Clinic (4)
3. ERdg 629. Special Topics in Reading (2) for a total of (4)
4. ESpe 540. Strategies for Remedial Teaching (4)
5. *Four units chosen from:*
 - Educ 543. Individualized Instruction (4)
 - EE1B 536. Teaching in a Multicultural Society (4)
 - ERdg 658. Literacy and Language Processes (4)

Certificate in School Business Management

Certificate Requirements (26 units)

1. EAdm 511. Contemporary School Business Management (4)
2. EAdm 512. School Finance and Budgeting (4)

3. EAdm 513. School Accounts and Related Functions (4)
4. EAdm 525. Classified Personnel Administration (4)
5. *Six units chosen from:*
 - EAdm 514A. School Business Management and Service Functions: Purchasing, Warehousing and Inventory (2)
 - EAdm 514B. School Business Management and Service Functions: Risk Management (2)
 - EAdm 514C. School Business Management and Service Functions: Facilities Planning, Construction (2)
 - EAdm 514D. School Business Management and Service Functions: Computer Services in Business Functions (2)
 - EAdm 514E. School Business Management and Service Functions: Maintenance, Operations and Transportation (2)
 - EAdm 514F. School Business Management and Service Functions: Employee Supervision (2)
6. *Four units of electives chosen from:*
 - EAdm 619. Legal Aspects of Education (4)
 - EClg 531. Introduction to Counseling (4)
 - ESpe 530. Psychology and Education of Exceptional Individuals (4)
 - PA 307. Public Relations in the Public Sector (4)

OR

Four additional units chosen from:

- EAdm 514A. School Business Management and Service Functions: Purchasing, Warehousing and Inventory (2)
- EAdm 514B. School Business Management and Service Functions: Risk Management (2)
- EAdm 514C. School Business Management and Service Functions: Facilities Planning, Construction (2)
- EAdm 514D. School Business Management and Service Functions: Computer Services in Business Functions (2)
- EAdm 514E. School Business Management and Service Functions: Maintenance, Operations and Transportation (2)
- EAdm 514F. School Business Management and Service Functions: Employee Supervision (2)

Certificate in Study Strategy Instruction for the Secondary Schools

The certificate in study strategy instruction for the secondary schools is for junior/senior high school teachers, administrators and counselors who wish to enhance their ability to incorporate study skill instruction into their curricula.

Admission to the Program

1. Postbaccalaureate standing;
2. Concurrent enrollment or completion of a multiple or single subject teaching credential.

Certificate Requirements (20 units)

1. Educ 601. Advanced Independent Study Topics in Education (1 to 4) for a total of (4)
2. ERdg 629. Special Topics in Reading (2) for a total of (4)
3. ESec 560. Study Skills for Secondary School (4)
4. ESec 602. Special Topics in Secondary Education (2) for a total of (4)
5. *Four units chosen from:*
 - Educ 543. Individualized Instruction (4)
 - EEIB 536. Teaching in a Multicultural Society (4)
 - ERdg 658. Oral and Written Language Development (4)

Certificate in Resource Specialist in Special Education

Admission to the Program

Admission to the university must precede admission to the certificate program.

1. A baccalaureate degree from an accredited college;
2. A valid special education teaching credential;
3. A cumulative grade point average of 2.6 in the last 90 quarter units and a 3.0 ("B") in all course work taken in education;
4. Special Education 530 or its equivalent; and a minimum of 20 credit hours in special education.

Certificate Completion Requirements

1. Three years teaching experience to include full-time teaching in both the regular and the special education classroom.

Certificate Requirements (20 units)

1. ESpe 630B. Topics in Research in Teaching and Learning: Special Education (4)
 2. ESpe 646. The Resource Specialist in Special Education (4)
 3. ESpe 679E. Special Education Field Work: Resource Specialist (4)
 4. *Four units chosen from:*
 - EAdm 601. Introduction to School Administration (4)
 - EAdm 610. Supervision of Instruction (4)
 - EAdm 613. School Personnel Administration (4)
 - EAdm 616. Administration of Special Services (4)
- Four units chosen in consultation with an advisor.

Educ— Education (general and core courses)
 EAdv— Advanced Education
 EClg— Educational Counseling (listed on Page 343)
 EAdm— Educational Administration (listed on Page 387)
 EEIB— Elementary Education
 EEnv— Environmental Education
 ERdg— Reading Education
 EReh— Rehabilitation Counseling (listed on Page 416)
 ESec— Secondary Education
 ESpe— Special Education
 ETec— Instructional Technology
 EVoc— Vocational Education

COURSE OFFERINGS IN EDUCATION (Educ)

Upper Division

542. Seminar in Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

543. Individualized Instruction

An individualized course on techniques and procedures for constructing materials, tracking students, classroom management, learning centers, record keeping and media involvement for individualizing instruction at all levels. (4 units)

595. Independent Study

Special topics involving library and/or field research. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and school approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Master's Degree Project

Prerequisite: advancement to candidacy. (4 units)

601. Advanced Independent Study Topics in Education

Special topics involving application of educational procedures. *Prerequisites: minimum grade point average of 3.0, consent of instructor and school approval of a written proposal of a project submitted on a standard application, and filed in advance of the term in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

603. Effective Communication in Education

Dynamics of interpersonal communication with an emphasis on the characteristics of an individual's participation in small groups within educational structures. Varying philosophical/theoretical approaches to teaching will be considered. (4 units)

610. Research Methodology in Education

Principles of research design, methods of data collection and analysis. (4 units)

623. The Science Curriculum

The structure and context of science education. Emphasis will be placed on the cognitive processes and curricular content of science as it applies to teaching. (2 units)

634. Research in Science Education

Topics include cognitive development, program development, attitudes, nature of science, teacher preparation, process and content, evaluation, and misconceptions/constructivism. Students will design an action research project in science education. (4 units)

645. Issues in Science, Technology and Society in the Classroom

Emphasis on the issues, strategies, and curricula appropriate for implementing the science/technology/society theme into the science classroom instruction. (2 units)

663. Introduction to Educational Research

Introduction to the vocabulary, design, sources of research in education; parametric and non-parametric statistics and evaluation of research. (4 units)

694. Master's Project in Science Education

Prerequisites: advancement to candidacy and consent of the graduate coordinator. (4 units)

695. Foundations of Education

History and theory of education within the setting of American society. This course must be taken during the first 12 units of course work toward the Master of Arts degree or before advancement to candidacy. (4 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the master's degree. Students enrolled in this course have full use of university facilities. *Prerequisites: advancement to candidacy and consent of school.* (0 units)

COURSE OFFERINGS IN ADVANCED EDUCATION (EAdv)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

610. Observation and Assessment for Reading Recovery Programs

Observational techniques for screening and selection of children for Reading Recovery intervention; assessing pupil strengths for providing appropriate instruction.

A. Teacher Leaders. *Prerequisite: admission to Reading Recovery Program for Teacher Leaders.* (3 units)

B. Teachers. *Prerequisite: admission to Reading Recovery Program for Teachers.* (3 units)

611. Observation and Assessment for DLL Reading Recovery Programs

Observational techniques for screening and selection of children for Reading Recovery intervention; assessing pupil strengths for providing appropriate instruction.

- A. Teacher Leaders. *Prerequisite: admission to Reading Recovery in Spanish/Descubriendo La Lectura (DLL) Program for Teacher Leaders.* (3 units)
- B. Teachers. *Prerequisite: admission to Reading Recovery in Spanish/Descubriendo La Lectura (DLL) Program for Teachers.* (3 units)

618. Clinical Implementation of Reading Recovery I

Clinical implementation that supports Reading Recovery literacy learning. Behind the glass teaching/observing experiences.

- A. Teacher Leaders. *Prerequisite: Advanced Education 610A.* (4 units)
- B. Teachers. *Prerequisite: Advanced Education 610B.* (4 units)

619. Clinical Implementation of DLL Reading Recovery I

Clinical implementation that supports Reading Recovery literacy learning. Behind the glass teaching/observing experiences.

- A. Teacher Leaders. *Prerequisite: Advanced Education 611A.* (4 units)
- B. Teachers. *Prerequisite: Advanced Education 611B.* (4 units)

620. Clinical Implementation of Reading Recovery II

Clinical implementation that supports Reading Recovery literacy learning. Behind the glass teaching/observing experiences.

- A. Teacher Leaders. *Prerequisite: Advanced Education 618A.* (4 units)
- B. Teachers. *Prerequisite: Advanced Education 618B.* (4 units)

621. Clinical Implementation of DLL Reading Recovery II

Clinical implementation that supports Reading Recovery literacy learning. Behind the glass teaching/observing experiences.

- A. Teacher Leaders. *Prerequisite: Advanced Education 619A.* (4 units)
- B. Teachers. *Prerequisite: Advanced Education 619B.* (4 units)

622. Clinical Implementation of Reading Recovery III

Clinical implementation that supports Reading Recovery literacy learning. Behind the glass teaching/observing experiences.

- A. Teacher Leaders. *Prerequisite: Advanced Education 620A.* (4 units)
- B. Teachers. *Prerequisite: Advanced Education 620B.* (4 units)

623. Clinical Implementation of DLL Reading Recovery III

Clinical implementation that supports Reading Recovery literacy learning. Behind the glass teaching/observing experiences.

- A. Teacher Leaders. *Prerequisite: Advanced Education 621A.* (4 units)
- B. Teachers. *Prerequisite: Advanced Education 621B.* (4 units)

679. Fieldwork for Reading Recovery

Studies of models of professional development and clerical supervision of reading teachers' fieldwork in administering, implementing and evaluating a district or regional Reading Recovery project. Must be repeated for a total of 12 units taken consecutively in one academic year.

- R. Reading Recovery Fieldwork. *Prerequisite: Advanced Education 610.* (4 units)
- S. DLL Fieldwork. *Prerequisite: Advanced Education 611.* (4 units)

COURSE OFFERINGS IN ELEMENTARY/BILINGUAL EDUCATION (EEIB)

Upper Division**536. Teaching in a Multicultural Society**

Cultural democracy and the quest for equal educational opportunity. Methods and teaching techniques for teaching in a multicultural setting. Developing cultural awareness of teachers to assist them in relating to and motivating culturally different students. (4 units)

541. Problems in Elementary Curriculum

Advanced study of some phase of the elementary school curriculum. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

542. Seminar in Elementary/Bilingual Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

604. Advanced Curricular Studies in Elementary Education

Current and new curricula in elementary school subjects (K-6). May be repeated once in the same subject area. *Prerequisite: teaching credential or consent of instructor.*

- A. Mathematics (2 units)
- B. Science (2 units)
- C. Social Studies (2 units)
- D. Language Arts (2 units)
- E. Fine Arts (2 units)
- F. Computers (2 units)

606. Theory and Practice in Teaching Bilingual Students I

Bilingual/cross-cultural teaching strategies and curriculum development; methods of integrating English and Spanish in the instructional program; evaluation of language skills, emphasis on social sciences and language arts. *Prerequisite: consent of instructor.* (4 units)

607. Theory and Practice in Teaching English as a Second Language

Second language acquisition theory, methods for teaching English as a second language (ESL), development and evaluation of materials for ESL instruction. (4 units)

608. Research in Bilingual/Cross-Cultural Education

Survey of current measurements and research in bilingual/cross-cultural education and their applications in the classroom. (4 units)

609. Research in Elementary School Subjects

Research conducted on selected educational topics. *Prerequisite: Education 663.*

- A. Mathematics (4 units)
- B. Science (4 units)
- C. Social Studies (4 units)
- D. Language Arts (4 units)
- E. Fine Arts (4 units)
- F. Computers (4 units)

610. Language Assessment in the Elementary Classroom

Assessment practices for language arts programs analyzed in light of their appropriateness for students with various levels of English proficiency. The selection, development, administration, and scoring of tests and authentic measures for evaluating the progress of language minority students will be reviewed, as well as standards for identification, reclassification, entry and exit of limited English proficient students into English as a second language program. (4 units)

612. Social and Cultural Foundations for Language Learning

The relationships between language and culture will be explored with an emphasis on some of the existent variations within the English language among different social and ethnic groups and how these differences have emerged. (4 units)

613. Cognition and Language Acquisition

An analysis of the language acquisition process as it emerges from the early grammars of the child and develops into the complex grammatical structures and patterns of the mature individual. (4 units)

620. Advanced Educational Psychology and the Developing Child

Advanced seminar exploring recent theory and research on cognition, personality, and psycho-social development, with an emphasis on examining their interactions with the learning process. *Prerequisite: Education 663.* (4 units)

622. Elementary School Curriculum

History, organization and operation of the elementary school; curriculum trends; recent practices in elementary education. Formerly Elementary Education 640. *Prerequisite: credential or teaching experience.* (4 units)

624. Advanced Teaching Strategies

Advanced teaching strategies, self and peer coaching for the improvement of teaching using a variety of clinical supervision models. Formerly Elementary Education 580. (4 units)

629. Special Topics in Elementary Education

Relevant issues, techniques, and topics in elementary education.

- A. Primary Language Literacy (4 units)

630. Children's Literature in the Classroom

Intensive study of children's literature as it applies in elementary and middle school classrooms with an emphasis on developing familiarity with the variety and wealth of literature available, strategies for classroom instruction and appropriate assessment tools. May not be taken for credit by students who have received credit for Elementary Education 645. *Prerequisite: Elementary Education 345 or consent of instructor.* (4 units)

632. Mathematics Clinic

Administration of diagnostic instruments and assessment procedures to elementary school students, followed by prescription and initiation of remedial measures to strengthen the mathematics areas. Formerly Elementary Education 577. *Prerequisites: Mathematics 301 and four additional quarter units in mathematics.* (4 units)

634. Advanced Social Studies Methods

Advanced seminar for elementary educators exploring current research, curriculum, and methods in social studies instruction. (4 units)

636. Advanced Science Methods

Intensive study of teaching science in elementary school. Exploration, analysis, interpretation and implementation of science process teaching. Intended for experienced teachers. Formerly Elementary Education 545. *Prerequisite: consent of instructor.* (4 units)

647. Topics in Teaching Elementary Science

Topics covered in the elementary science methods course. Concentrates on the current resources, techniques, research, curricula, and technology being used in elementary science education. Three hours lecture and two hours science laboratory activities. (4 units)

679. Field Work

Field experience in selected teaching methods and materials development. *Prerequisite: consent of program coordinator.*

- A. Teaching English as a Second Language (Also offered as Secondary Education 679A. Students may not receive credit for both.) (4 units)
- B. Bilingual Education (4 units)

680. Practicum

Simulation of classroom-based practice in teaching methods and materials to include planning, teaching performance, classroom organization, student management and evaluation competencies. *Prerequisite: consent of program coordinator.*

A. Teaching English as a Second Language (Also offered as Secondary Education 680A. Students may not receive credit for both.) (4 units)

B. Bilingual Education (4 units)

697. Implementing Educational Change

Seminar examining the relationships and techniques involved when teachers plan for educational change. The emphasis will be on change theory in the elementary school setting. *Prerequisites: completion of all core and required program elective courses; completion of eight units of curriculum electives.*

(4 units)

698. Research and Evaluation Project Design

Steps and processes involved in the design and implementation of research and evaluation projects in education.

Prerequisites: completion of all core and required program courses. (2 units)

COURSE OFFERINGS IN ENVIRONMENTAL EDUCATION (EEnv)

Upper Division**542. Seminar in Environmental Education**

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

635. Environmental Education in the Curriculum

An introductory course on integrating into the curriculum environmental concepts and values concerning the relationship of people with their natural and physical surroundings. Review of curricula, conceptual frameworks, resources and methods. (4 units)

642. Developing the Curriculum Through Outdoor Education

Procedures and instructional materials for teaching out of doors and the integration of environmental education into the curriculum. Includes program development for resident outdoor school. *Prerequisite: Environmental Education 635.* (4 units)

643. Community Resources for Environmental Education

Application of teaching resources and environmental issues. Survey of resource agencies. Organizing visits to educational sites. *Prerequisite: Environmental Education 635.* (4 units)

670. Topics in Environmental Education

Techniques, topics and relevant issues in environmental education. May be repeated for credit as topics change.

Prerequisite: Environmental Education 635.

A. Current Issues (2 units)

B. Readings in Environmental Education (2 units)

C. Outdoor Studies (2 units)

D. Laboratory Science Applications (2 units)

E. Language Arts Applications (2 units)

F. Social Studies Applications (2 units)

G. Technology Applications (2 units)

H. Arts Applications (2 units)

J. Environmental Ethics (2 units)

K. Selected Topics (2 units)

L. Nature Study Applications (2 units)

M. Plant Study Applications (2 units)

N. Animal Study Applications (2 units)

P. Marine Science Applications (2 units)

679. Fieldwork: Environmental Education

Field experience in environmental education. May be repeated for a total of 8 units. *Prerequisites: Environmental Education 635 and consent of program coordinator.* (4 units)

COURSE OFFERINGS IN READING EDUCATION (ERdg)

Upper Division**542. Seminar in Reading Education**

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

612. Reading Recovery Theoretical Seminar for Teacher Leaders I

Literacy theory that supports Reading Recovery including study of emergent literacy, language and learning, and of reading and writing processes as they relate to early readers. Examination of current research and observed practices. *Prerequisite: Advanced Education 610A.* (4 units)

613. DLL Reading Recovery Theoretical Seminar for Teacher Leaders I

Literacy theory that supports Reading Recovery including study of emergent literacy, language and learning, and of reading and writing processes as they relate to early readers. Examination of current research and observed practices. *Prerequisite: Advanced Education 611A.* (4 units)

614. Reading Recovery Theoretical Seminar for Teacher Leaders II

Literacy theory that supports Reading Recovery including study of emergent literacy, language and learning, and of reading and writing processes as they relate to early readers. Examination of current research and observed practices. *Prerequisite: Reading Education 612.* (4 units)

615. DLL Reading Recovery Theoretical Seminar for Teacher Leaders II

Literacy theory that supports Reading Recovery including study of emergent literacy, language and learning, and of reading and writing processes as they relate to early readers. Examination of current research and observed practices. *Prerequisite: Reading Education 613.* (4 units)

616. Reading Recovery Theoretical Seminar for Teacher Leaders III

Literacy theory that supports Reading Recovery including study of emergent literacy, language and learning, and of reading and writing processes as they relate to early readers. Examination of current research and observed practices. *Prerequisite: Reading Education 614.* (4 units)

617. DLL Reading Recovery Theoretical Seminar for Teacher Leaders III

Literacy theory that supports Reading Recovery including study of emergent literacy, language and learning, and of reading and writing processes as they relate to early readers. Examination of current research and observed practices. *Prerequisite: Reading Education 615.* (4 units)

620. Approaches to Literacy

Examination of theoretical approaches to literacy learning. (4 units)

622. Creating Occasions for Literacy Learning

Investigating, creating and making critical judgments about curriculum materials, including technology, appropriate to different theoretical perspectives. *Prerequisite: Reading Education 620.* (4 units)

624. Socio-psycholinguistics and Literacy

Social and linguistic processes of literacy learning and the implications for instruction. *Prerequisite: Reading Education 620.* (4 units)

625. Practicum in Literacy

Supervised application of curriculum events with children grades 1-12 in individual and small group settings. *Prerequisites: Reading Education 620, 631, 632 and 658.* (4 units)

628. Special Projects in Reading

Research in writing of a curricular project that provides an innovative design for a significant change in a school's reading/language arts program; includes objectives, methodology, recommendations and an abstract. (4 units)

629. Special Topics in Literacy

Relevant issues, techniques and topics in literacy. May be repeated for credit as topics change. *Prerequisite: Reading Education 620.* (2 units)

631. Curriculum Reform in Literacy

Examination of the effects of theoretical approaches on reforming literacy curriculum. *Prerequisite: Reading Education 620.* (4 units)

632. Assessment/Evaluation in Literacy

Review of literacy assessment, methods of data collection, analysis, formal and informal literacy assessment instruments

of student performance. *Prerequisite: Reading Education 620.* (4 units)

633. Multi-modal Meaning Systems in Literacy

How various meaning systems, including the arts, affect literacy learning. *Prerequisite: Reading Education 620.* (4 units)

640. Early Literacy Intervention Strategies

Investigation of literacy intervention strategies appropriate for use in the primary classroom. *Prerequisite: Reading Education 620.* (4 units)

641. Multicultural Perspectives and Issues of Literacy

Understanding multicultural perspectives and issues within the contexts of literacy with diverse populations. *Prerequisite: Reading Education 620.* (4 units)

642. Images of Culture through Children's Literature

Becoming acquainted with children's literature of various cultures and organizing this literature for curricular choices. *Prerequisite: Reading Education 620.* (4 units)

658. Literacy and Language Processes

Methods for integrating the processes of language that underlie effective literacy curriculum. *Prerequisite: Reading Education 620.* (4 units)

679. Field Work: Reading/Language Arts Specialist

Combines classroom supervision, periodic seminar discussions on relevant topics and portfolio presentation. Graded credit/no credit. *Prerequisite: Reading Education 620.* (4 units)

COURSE OFFERINGS IN SECONDARY EDUCATION (ESec)

Upper Division

510. Teaching English as a Second Language in Secondary Schools

Offers a broad overview of approaches and methods used in language teaching, but will focus specifically on practices that can support the development of English language proficiencies needed for success in secondary schools. *Prerequisites: Secondary Education 321 and 333.* (4 units)

515. Issues and Trends in Secondary Education

Examination of issues and trends in secondary education. May be repeated with consent of advisor. *Prerequisite: consent of advisor.* (2 units)

516. Models of Teaching and Advanced Teaching Methodology

Demonstration and discussion on various models of teaching and advanced teaching methods relevant to secondary school classrooms. (4 units)

517. Middle School Curriculum and Instruction

Examination of middle school curriculum design and instructional practices. (4 units)

521. Instructional Strategies and Approaches to Middle Grade

Instructional methods, techniques and evaluation procedures especially appropriate for middle schools. (4 units)

522. Practicum in Middle Grade Education

Practicum for middle grade philosophies, objectives, and functions. *Prerequisites: Secondary Education 443, 517 and 521.* (4 units)

542. Seminar in Secondary Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

545. Adolescents Literacy Tutoring

Tutor training for students to work with low literacy and at-risk adolescents in reading. Topics include literacy methods, multicultural issues, learning disabilities and use of educational software. 20 hours lecture and 48 hours of tutoring an adolescent in a field-based setting. *Prerequisite: consent of instructor.* (4 units)

554. Internship Seminar I

Seminar for secondary interns, focusing on knowledge, skills and attitudes required of a first-year teacher. Graded credit/no credit. *Prerequisite: admission to Single Subject Teaching Credential Internship Track.* (2 units)

555. Internship Seminar II

Seminar for secondary interns, focusing on knowledge, skills and attitudes required of a first year teacher. Graded credit/no credit. *Prerequisite: Secondary Education 554.* (2 units)

556. Internship Seminar III

Seminar for secondary interns, focusing on knowledge, skills and attitudes required of a first year teacher. Graded credit/no credit. *Prerequisite: Secondary Education 555.* (2 units)

560. Study Skills for Secondary School

Programs, methods and materials for teaching study skills to exceptional junior and senior high school students. Study strategies include: note taking, organization, memory devices, study contracts and preparation for examinations. (4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

602. Special Topics in Secondary Education

Exploration, demonstration and application of issues and techniques in selected topics of current concern in secondary education (such as, inquiry-discovery teaching, simulations and games, alternate education programs, consumer education, team teaching, career education, teacher as counselor). May be repeated for credit as topics change. (2 units)

623. Foundations of Middle School Education

History and philosophical foundations of middle school education; examination of theories and research related to middle school students, curriculum, programs and practices. (4 units)

648. Advanced Topics in Teaching Middle School Science

Current resources, techniques, research, curricula, and technology specific to teaching science to early adolescents. Three hours lecture and two hours science laboratory activities. (4 units)

649. Advanced Topics in Teaching Sciences at the High School Level

Current resources, techniques, research, curricula and technology specific to the science content areas in the high school curriculum. Three hours lecture and two hours science laboratory activities. (4 units)

664. Project Design in Teacher Education

Development of research proposals with emphasis on master's projects. (2 units)

666. Techniques and Applications of Mathematics Education

Applications of theory in mathematics teaching including materials development in the design and implementation of mathematics instruction, audiovisual technology, computer-assisted instruction, and nontraditional curricula. Focus on techniques in pre-algebra, algebra, geometry, analytic geometry, trigonometry and precalculus. (4 units)

672. Educational Assessment in Mathematics Teaching

Program and learner assessment in mathematics using curriculum evaluation, testing, and evaluation systems for the purpose of improving instruction through problem diagnosis, intervention and redesign. (4 units)

678. Mathematics Clinic for Secondary Education

Administration of diagnostic instruments and assessment procedures to secondary school students followed by prescription and initiation of remedial instruction to strengthen mathematics skills. (4 units)

679. Field Work

Field experience in selected teaching methods and materials development. *Prerequisite: consent of program coordinator.*

A. Teaching English as a Second Language (Also offered as Elementary Education 679A. Students may not receive credit for both.) (4 units)

680. Practicum

Simulation of classroom-based practice in teaching methods and materials development to include planning, teaching performance, classroom organization, student management, and evaluation competencies. *Prerequisite: consent of program coordinator.*

A. Teaching English as a Second Language (Also offered as Elementary Education 680A. Students may not receive credit for both.) (4 units)

699. Secondary School Curriculum

Study of the development of the American secondary school with emphasis on current and emerging patterns of organization and curriculum. *Prerequisite: graduate standing.* (4 units)

COURSE OFFERINGS IN SPECIAL EDUCATION (ESpe)

Upper Division

523. Mainstreaming Handicapped Individuals in the Elementary Classroom

Introduction to the adaptation of curriculum, methods and materials necessary for accommodating exceptional individuals in the regular elementary classroom. (2 units)

529. Introductory Methods for Special Education Interns

Instruction in the characteristics of students with disabilities, positive classroom and behavior management, effective instruction skills, modification of core curriculum, curriculum-based assessment, effective relationships with paraprofessionals, and applicable special education rules and regulations. (4 units)

530. Psychology and Education of Exceptional Individuals

Characteristics and educational implications of physical, intellectual, social and emotional deviations among exceptional individuals. Ethical and legal aspects of special education. Observations in educational settings. (4 units)

532. Introduction to Teaching Individuals with Exceptional Needs

Learning characteristics of individuals with handicaps related to educational procedures and intervention strategies. Study and observation of education and intervention theory and practices. *Prerequisite: Special Education 530 or consent of instructor.* (4 units)

538. Introduction to Teaching the Gifted and Talented

Definition, characteristics and development of the gifted and talented individual. Identification procedures. Current legislation and educational practices. Eight hours of class and activities weekly. *Prerequisite: consent of instructor.* (4 units)

539. Programs for Teaching the Gifted and Talented

Development of school programs for gifted and talented: identification, objectives, scheduling, curriculum, materials and program assessment. *Prerequisites: Special Education 538 and consent of instructor.* (4 units)

540. Strategies for Remedial Teaching

Methods of diagnosing needs, teaching basic subjects; organizing curriculum, and controlling behavior of low achieving students in the regular elementary classroom. (4 units)

542. Seminar in Special Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

620. Classroom Management for Students with Learning and Behavior Problems

Addresses strategies for managing the diverse classroom, handling individual student behavior problems, and group strategies for preventing classroom disruptions and maintaining a positive learning environment. Content includes modifying student behavior and developing student autonomy and self-control. Field study experience required. *Prerequisite: Special Education 530.* (4 units)

626. Curriculum Development for Individuals with Physical Handicaps

Strategies and implications for teaching physically handicapped children and youth in mainstream and special education settings. (4 units)

630. Topics in Research in Teaching and Learning

Survey of current research in teaching and learning. *Prerequisite: consent of instructor.*

A. Gifted and Talented (4 units)

B. Special Education (4 units)

635. Effective Communication with Professionals and Families

Develop effective communication skills to foster an atmosphere of collaboration among professionals and families, to support quality programs for students with disabilities. Models for collaboration and consultation will be explored. Formerly Special Education 535. *Prerequisites: Special Education 530 and 620.* (4 units)

637. Assessment and Evaluation

Techniques for identification and assessment. Gathering diagnostic information in academic and social-emotional areas for program preparation and implementation. Formerly Special Education 681. *Prerequisites: Special Education 530 and 620.* (4 units)

640. Serious Emotional Disturbance

Provides a general knowledge base regarding serious emotional disturbance, including current curriculum practices, appropriate instructional procedures, program evaluation, effective intervention techniques, strategies to promote greater social development, assessment procedures, and integration strategies. Formerly Special Education 668D. *Prerequisites: Special Education 530, 620 and 635.* (4 units)

644. Problems in Educational Assessment

Teacher-made tests, standardized tests and other published instruments of use in assessing growth in the affective, psychomotor and cognitive domains. (4 units)

646. The Resource Specialist in Special Education

Development and evaluation of consultation and coordination procedures for the special education resource specialist. *Prerequisites: Special Education 630B and special education specialist credential or consent of instructor.* (4 units)

649. Curriculum and Methods in Special Education: Secondary Transition and Career/Vocational Preparation

Methods, materials and strategies for facilitating career, vocational and adult skills development in learners with disabilities. Interfacing with agencies and other support providers in the transition from secondary programs to adult life. Formerly Special Education 684B. *Prerequisites: Special Education 530, 620, 635, 637, 640, and 679A or 679C, or consent of instructor.* (4 units)

651. Curricular Strategies for Students with Moderate to Severe Disabilities

Assessment, procedures and instructional strategies for learners with moderate to severe disabilities. Emphasis placed upon data-based, functional instruction. A 20-hour practicum will be required. Formerly Special Education 668A. *Prerequisites: Special Education 530, 620, 635, 637, 640, 679C or consent of instructor.* (4 units)

652. Applied Curricular Strategies for Students with Moderate to Severe Disabilities

Principles of systematic instruction to community-based instruction, functional academics, language training, and social skills training. Application of computer and other technology to learners with severe handicaps. A 20-hour practicum will be required. Formerly Special Education 668C. *Prerequisites: Special Education 530, 620, 635, 637, 640, 651, 679C, or consent of instructor.* (4 units)

653. Medical, Physical and Social Aspects of Education of Learners with Moderate to Severe Disabilities

Responsibilities of educators in medical, physical and social areas. A 20-hour practicum will be required. Formerly Special Education 688. *Prerequisites: Special Education 530, 620, 635, 637, 640, 679C, or consent of instructor.* (4 units)

655. Curriculum and Methods in Special Education: Language Arts

Methods, materials and strategies for exceptional learners in the areas of language arts: reading, writing, speaking and listening. Formerly Special Education 684A. *Prerequisites: Special Education 530, 620, 635, 637, 640, 679A, or consent of instructor.* (4 units)

656. Curriculum and Methods in Special Education: Core Subjects

Methods, materials and strategies for designated subject areas with particular emphasis on adapting and modifying curriculum from general education frameworks for students with mild to moderate special needs. Formerly Special Education 684C. *Prerequisites: Special Education 530, 620, 635, 637, 640, 679A, or consent of instructor.* (4 units)

657. Seminar on Mild to Moderate Disabilities

Synthesis and application of information on assessment, instruction, development and delivery of quality instruction, providing instruction and appropriate support for use in regular education settings. Formerly Special Education 683. *Prerequisites: Special Education 530, 620, 635, 637, 640, 655, 656, 679A, or consent of instructor.* (4 units)

660. Instructional Planning for Culturally and Ethnically Diverse Students with Special Needs

Critiques basic concepts and theories related to this special population. Includes cultural characteristics, cultural transmission, acculturation and second language acquisition, particularly as they relate to assessment, instructional programming, parent involvement strategies and collaboration with service providers for students with disabilities. *Prerequisites: Special Education 530, 620, 635, 637, 640; 649 and 651 or 652, 653 or 655; 656, 657, or consent of instructor.* (4 units)

679. Special Education Field Work

Supervised field experiences in selected program topics. Requires a minimum of 80 hours field experience in the appropriate special education setting for each four unit course. *Prerequisite: consent of program coordinator.*

- A. Mild to Moderate Disabilities I. *Prerequisites: Special Education 530, 620, 635, 637, and 640.* (4 units)
- B. Mild to Moderate Disabilities II. *Prerequisites: Special Education 530, 620, 635, 637, 640, 649, 655, 656, 657, 660, and 679A.* (4 units)
- C. Moderate to Severe Disabilities I. *Prerequisites: Special Education 530, 620, 635, 637, and 640.* (4 units)
- D. Moderate to Severe Disabilities II. *Prerequisites: Special Education 530, 620, 635, 637, 640, 649, 651, 652, 653, 660 and 679C.* (4 units)
- E. Resource Specialist. *Prerequisite: Special Education Specialist Credential. Prerequisite or corequisite: Special Education 646.* (4 units)

680. Internship Fieldwork for Special Education

Supervised field experience for interns in learning handicapped and severely handicapped intern programs. Must be repeated for a total of 24 units.

- A. Learning Handicapped. *Prerequisite: admission to the Learning Handicapped Intern Program.* (4 units)
- B. Severely Handicapped. *Prerequisite: admission to the Severely Handicapped Intern Program.* (4 units)

685. Advanced Behavior Management

Advanced techniques for teaching students with serious problem behaviors including crisis management and other interventions derived from psychodynamic, psychoeducational, behavioral, cognitive and social learning theory. Field study experience required. *Prerequisites: Special Education 530, 620, 635, 637, 640, 679A, 679C or consent of instructor.* (4 units)

691. Issues and Trends in Special Education

Specialized in-depth study of selected topics in special education. Field study experience included. *Prerequisites: Special Education 530, 620, 635, 637, 640; and 679A or 679C; or consent of instructor.*

- A. Current Issues (4 units)
- B. Collaboration and Consultation (4 units)
- C. Early Childhood (4 units)
- D. Instructional Technologies (4 units)
- E. Administration (4 units)
- F. Historical (4 units)
- G. Special Populations (4 units)
- H. Transition (4 units)
- J. Post Secondary (4 units)

COURSE OFFERINGS IN INSTRUCTIONAL TECHNOLOGY (ETec)

Upper Division

537. Introduction to Computer Technology in Education

Operations, terminology and components of computing systems are introduced. Emphasis is on applications including word processing, data base and spreadsheet. No programming or previous computer experience required. May not be taken for credit by students who have received credit for Computer Science 127. One hour lecture and two hours laboratory. Meets Level I competencies for the clear credential. (2 units)

542. Seminar in Instructional Technology

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

544. Construction of Instructional Materials

Various ways to design and produce instructional materials. Emphasis on use of media to meet instructional objectives. Procedures for systematic evaluation of instructional materials. (4 units)

546. Computer Based Technology in Education

Introduction to computer applications, computer-based technology, computer-assisted instruction, programming and authoring languages, and teacher utility programs in educational settings. Meets Level IIB competencies for the clear credential. Three hours lecture and two hours laboratory. *Prerequisite: Instructional Technology 537.* (4 units)

547. Educational Technology

Introduction to instructional systems. Components to include video-disc, satellite down links, computers, brain games and video. Storage and retrieval systems will be included. *Prerequisite: consent of instructor.* (4 units)

548. Seminar in Instructional Design

Theories of instruction; design and production of instructional modules including specification and analysis of objectives, measurement, instructional activities and selection of methods and materials and evaluation techniques. *Prerequisite: consent of instructor.* (4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

621. Reading/Language Arts with Technology Integrations

Using technology to enhance teaching of literacy and language. Emphasis is on building curriculum that effectively uses computers and other technology. Staff development and leadership in designing models of integration into language arts will be explored. Three hours lecture and two hours laboratory. *Prerequisite: Instructional Technology 546 or equivalent.* (4 units)

623. Technology in School Administration and Counseling

Assisting school administrators and counselors in developing the knowledge and skills needed to apply computer technology to school and student management, grades K-12. (4 units)

634. Information Systems in Education

Information systems providing history, current development and future potential of on-line and off-line data bases. Methods of search and retrieval of on-line and off-line information will be explored. Three hours lecture and two hours laboratory. (4 units)

641. Media and Strategies in Teaching

An assessment of media used in instruction with emphasis on teaching strategies and principles of learning. (4 units)

651. Computers and Learning

The design of courseware and use of computer-based technology in educational settings as related to appropriate learning theories. May not be taken for credit by students who have received credit for Education 551. *Prerequisites: Education 332 and Instructional Technology 546.* (4 units)

652. Advanced Computer Applications in Education

Current uses and future trends in computer-based educational technologies. Integration of these technologies into subject area and grade level curricula. May not be taken for credit by students who have received credit for Education 552. Three hours lecture and two hours laboratory. *Prerequisite: Instructional Technology 546.* (4 units)

653. Developing Computer Based Instructional Materials

Introduction to educational uses of programming languages in the curriculum. Design and development of educational programs using the appropriate computer language. May not be taken for credit by students who have received credit for Education 553. Three hours lecture and two hours laboratory. *Prerequisites: Instructional Technology 651 and 652.* (4 units)

674. Telecommunications in Education

Telecommunications for instruction and research within the learning environment. Public and commercial Bulletin Board Systems, commercial and cable TV, commercial and public radio will be investigated in relation to current and future education uses. (4 units)

675. Instructional Graphics

Graphics for instructional resources, including elements of graphic design and preparation for different media. Visual design of data, both video and text. Three hours lecture and two hours laboratory. (4 units)

682. Interactive Multimedia

Interactive video, simulation and games, robotics and authoring systems will be analyzed. Techniques for applying systems to instructional situations will constitute projects in this course. Three hours lecture and two hours laboratory. (4 units)

692. Practicum for Computer Resource Personnel
Management of educational computing resources. Principles of adult learning and effective inservice education. Application of advanced curriculum development and evaluation theory. Weekly seminars and directed experiences in school computer laboratory setting required. *Prerequisites: Instructional Technology 651 and 652.* (4 units)

COURSE OFFERINGS IN VOCATIONAL EDUCATION (EVoc)

Upper Division

501. Principles and Methods for Teaching Designated Subjects

Application of instructional methodology for designated subjects with emphasis on student performance objectives, lesson planning, teaching methods, educational materials, and evaluation techniques. (4 units)

502. Instructional Support for Teaching Designated Subjects

Examination of instructional support for designated subjects with emphasis on program advisory committees, student placement, facilities planning, budgeting, student organizations, public relations, career advancement and educational philosophy. *Prerequisite: Vocational Education 501 or consent of instructor.* (4 units)

503. Contemporary Issues in Teaching Designated Subjects

Examination of contemporary issues in designated subjects with emphasis on individual education plans, basic skills, school law, multicultural activities, special needs students, safety and performance assessment instruments. *Prerequisite: Vocational Education 501 or consent of instructor.* (4 units)

504. Principles of Adult Education

History, philosophy and social significance of adult education, especially in California; the adult as a student; investigation of the theories and application of the principles of adult education. (4 units)

508. Organization and Structure of Designated Subjects Programs

Investigation and application of principles of facility planning, budgeting, funding sources and related topics as they apply to designated subjects instructional programs. *Prerequisite: a valid designated subjects teaching credential.* (4 units)

509. Personnel Management in Designated Subjects Programs

Principles of personnel selection, evaluation, supervision, school law and related topics as they apply to designated subjects instructional programs. *Prerequisite: a valid designated subjects teaching credential.* (4 units)

510. Field Work in Coordination and Supervision of Designated Subjects Programs

Supervised field work in coordination and supervision of designated subjects programs. Students will contract to perform administrative tasks related to site-based instructional programs. *Prerequisites: a valid designated subjects teaching credential and completion of or concurrent enrollment in Vocational Education 508 and 509 or consent of instructor.* (4 units)

518. Field Work in Designated Subjects

Supervised field work for the Designated Subjects Teaching Credential. Includes lesson planning and instructional delivery in an actual teaching environment with evaluation of teaching performance by the on-site supervisor. *Prerequisites or corequisites: Vocational Education 501 and consent of instructor.* (4 units)

519. Computer Applications for Vocational Education Teachers

Application of personal computers to the preparation of written and graphic materials used by teachers of vocational, occupational and professional subjects. Three hours lecture and two hours laboratory. (4 units)

520. Curriculum Development in Vocational Education

Theory and principles of curriculum development as they apply to vocational, occupational and professional courses. Students will develop a complete curriculum for a course that they could teach. *Prerequisite: Vocational Education 501 or its equivalent.* (4 units)

521. Assessing Vocational Student Progress

The development and use of evaluation instruments such as written tests, and criterion-referenced and norm-referenced evaluations. *Prerequisite: Vocational Education 520 or consent of instructor.* (4 units)

522. Directing and Managing Occupational Programs

Principles and techniques of design, implementation, management and evaluation of training organizations and programs. *Prerequisite: Vocational Education 520, Management 302 or Psychology 302.* (4 units)

523. Learning Theory and Instructional Research Applied to Adult Learners

Application of psychological principles to learning processes relevant to adult learners. Focus is on informed decisions about psycho-educational designs which will maximize individual development in cognitive, affective, conative, and psychomotor areas. (4 units)

542. Seminar in Vocational Education

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

637. Foundations of Vocational Education

Historical context, philosophy and development of vocational education. *Prerequisite: graduate standing.* (4 units)

638. Critical Issues for the Professional Vocational Educator

Current legislation, program planning, professional development and current issues in vocational education. *Prerequisite: Vocational Education 637 or consent of instructor.* (4 units)

639. Professional Competencies in Vocational Education

Roles of professional organizations, research in vocational education, grant writing and strategies for project evaluation. *Prerequisite: Vocational Education 638 or consent of instructor.* (4 units)

EDUCATIONAL ADMINISTRATION

Master of Arts in Educational Administration

Department of Advanced Studies in Education

Faculty Office Building, Room 126
880-5606

FACULTY: Billie Blair, William Camp, Cheryl Fischer,
Kenneth Lane, David Stine, Stanley Swartz,
Arthur Townley (Coordinator)

MASTER OF ARTS IN EDUCATIONAL ADMINISTRATION

Requirements (48 units)

Admission to the Program

In addition to the general requirements of the university for admission as a postbaccalaureate student, specific requirements for admission to the Master of Arts in Educational Administration are:

1. An application for admission to the program must be submitted;
2. A valid California teaching, pupil personnel or health services credential or evidence of eligibility;
3. Completion of the graduate writing requirement;
4. One year of full-time teaching, substitute teaching does not apply;
5. A cumulative grade point average of 3.0 ("B") in all courses taken in education.

Students who do not meet these criteria may be admitted as conditionally classified graduate students. Students admitted in this category may be changed to classified standing with approval of the School of Education. No more than 20 quarter units may be used to demonstrate fitness to complete the program. Normally, a student is expected to be working concurrently for a credential in administrative services.

Advancement to Candidacy

In order to be formally advanced to candidacy, a student must have:

1. Achieved classified graduate standing;
2. Completed, with a grade point average of 3.0 ("B"), 16 quarter hours of course work, at least 12 of which must have been on this campus and approved by an advisor in the School of Education;

Note: Between the time of completing 15 units and 23 units of applicable course work the student is required to apply for advancement to candidacy.

3. Secured approval of candidacy from the School of Education;

4. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the Dean of the School of Education and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable work with 34 completed in residence at this university;
2. A minimum of 24 quarter units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of a written comprehensive exam or completion of a master's degree thesis. Students who elect to complete a thesis will register for Educational Administration 699; these units may be part of the required 48 units;
5. Any additional general requirements not cited above and listed on Page 320.

The written comprehensive examination is designed to test the student's knowledge of the field of school administration. The examination is offered once each quarter. The student may enroll in the examination no earlier than the last quarter in which course work is taken. The student may take the examination (or any of its parts) three times. Approval to retake the examination may be, at any time, contingent upon completion of additional designated courses.

Degree Requirements (48 units)

Prerequisite Course:

1. EAdm 601. Introduction to School Administration (4)

Forty units chosen from:

1. EAdm 604. The School Principalship (4)
2. EAdm 607. School Community Relations (4)
3. EAdm 610. Supervision of Instruction (4)
4. EAdm 613. School Personnel Administration (4)
5. EAdm 616. Administration of Special Programs (4)
6. EAdm 619. Legal Aspects of Education (4)
7. EAdm 622. School Curriculum (4)
8. EAdm 625. School Finance and Business Management (4)
9. Choose one of the following:
EAdm 628. Fieldwork in Educational Administration (4)
EAdm 630. Internship Fieldwork in Educational Administration (4)
10. Educ 663. Introduction to Educational Research (4)

Four units chosen from:

1. EAdm 699. Master's Thesis in Educational Administration (4)
2. A. Comprehensive Examination in Educational Administration (0);
B. Four elective units chosen in consultation with an advisor in the program.

COURSE OFFERINGS IN EDUCATIONAL ADMINISTRATION (EAdm)

Upper Division

511. Contemporary School Business Management

Analysis of various approaches to school business administration, current trends, models of organization and management, relationship to county, state, and federal agencies, and functions of business management in relation to the size of school districts. (4 units)

512. School Finance and Budgeting

Legal considerations in finance and budgeting, evaluation of the California school finance program, fiscal relationship to county, state and federal agencies, budget control, school revenues and expenditures and budgetary procedures and processes. (4 units)

513. School Accounts and Related Functions

School fund accounting, attendance accounting, organization and review of student body accounts, state and federal project funding, and certificated and classified payroll laws and regulations pertaining to school accounting procedures. *Prerequisite: Accounting 211 (or 311) or equivalent.* (4 units)

514. School Business Management and Service Functions

A variable topic course on management and service functions in the school business office. May be repeated for credit as topics change.

- A. Purchasing, Warehousing and Inventory (2 units)
- B. Risk Management (2 units)
- C. Facilities Planning, Construction (2 units)
- D. Computer Services in Business Functions (2 units)
- E. Maintenance, Operations and Transportation (2 units)
- F. Employee Supervision (2 units)

525. Classified Personnel Administration

Recruitment, selection, induction, training, evaluation and contract negotiations involving classified employees under merit and non-merit systems. (4 units)

542. Seminar in Educational Administration

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite: graduate standing or consent of instructor.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

601. Introduction to School Administration

Introduction to the field of school administration with emphasis on theories of school administration, finance, self-assessment and roles of federal, state and local government. Formerly Educational Administration 673. *Prerequisite: admission to Educational Administration program or consent of program coordinator.* (4 units)

604. The School Principalship

Role of the school principal with emphasis on leadership, decision-making, group-processes, school climate and site-level budgeting. Formerly Educational Administration 669. *Prerequisites: Educational Administration 601, and admission to Educational Administration program or permission of program coordinator.* (4 units)

607. School Community Relations

Techniques of working with community agencies and groups, including ethnic groups, professional organizations, school boards and advisory groups with attention to emerging social forces. Formerly Educational Administration 676. *Prerequisites: Educational Administration 601, and admission to Educational Administration program or permission of program coordinator.* (4 units)

610. Supervision of Instruction

Supervision of classroom school personnel and programs using a variety of models, including clinical supervision. Formerly Education 651/Educational Administration 661. *Prerequisites: Educational Administration 601, and admission to Educational Administration program or permission of program coordinator.* (4 units)

613. School Personnel Administration

Recruitment, selection and evaluation of personnel at all levels of employment. Laws and policy development in relationship to school district and collective bargaining. Formerly Education 651/Educational Administration 662. *Prerequisites: Educational Administration 601, and admission to Educational Administration program or permission of program coordinator.* (4 units)

616. Administration of Special Programs

Responsibilities and roles in administration of special programs including but not limited to special education, counseling, vocational education and adult education. *Prerequisites: Educational Administration 601 and admission to Educational Administration program or permission of program coordinator.* (4 units)

619. Legal Aspects of Education

Current laws and court decisions affecting public education with special emphasis on the laws of the State of California. Formerly Educational Administration 659. *Prerequisites: Educational Administration 601, 604, 607, 610, 613, and 616; admission to Educational Administration program and advancement to candidacy, or permission of program coordinator.* (4 units)

622. School Curriculum

History and organization of public schools in the United States, including curriculum trends and practices. Formerly Educational Administration 654. *Prerequisites: Educational Administration 601, 604, 607, 610, 613 and 616, and admission to Educational Administration program and advancement to candidacy, or permission of program coordinator.* (4 units)

625. School Finance and Business Management

Economics of school finance; evolution of the California School Finance Program; fiscal relationship to county, state and federal agencies; school budget procedures; school

accounting; and the planning and financing of school facilities. Formerly Educational Administration 511 and 512. *Prerequisites: Educational Administration 601, 604, 607, 610, 613 and 616; and admission to the Educational Administration Program and advancement to candidacy or permission of program coordinator.* (4 units)

628. Fieldwork in Educational Administration

Field experience consisting of four units taken at the elementary or the secondary level, coordinated with the district. For the credential, the course must be taken at the elementary and repeated at the secondary level for a total of eight units. This course consists of a minimum 120 hours of field work experience. Formerly Educational Administration 679. *Prerequisites: Educational Administration 601, 604, 607, 610, 613, and 616; and admission to Educational Administration Program, advancement to candidacy and permission of program coordinator.* (4 units)

630. Internship Fieldwork in Educational Administration

Field experiences consisting of four units per quarter for students enrolled in the Preliminary Administrative Services Credential Program, Internship Option. May be repeated to a maximum of 24 units. *Prerequisite: consent of program coordinator.* (4 units)

660. Advanced Field Studies: Assessment

Introductory field work structured to provide the entering student with an assessment of strengths and weaknesses as a new administrator. *Prerequisite: admission to Professional Administrative Services Credential Program.* (3 units)

664. Principles of Leadership, Organizational Theory and Decision Making

Seminar in principles of leadership and organizational theory including a review of leadership styles, a variety of management strategies and human relations skills. The dynamics of team building and effective decision-making are also studied. Formerly Educational Administration 690A. Three units lecture, one unit fieldwork. *Prerequisites: admission to Professional Administrative Services Credential Program, completion of or concurrent enrollment in Educational Administration 660, or permission of program coordinator.* (4 units)

667. Instructional Leadership for Program Development and Evaluation

Seminar in practical and theoretical issues related to leadership, including: effective schools, teacher supervision and evaluation, staff development, instructional management and support, quality control, and computer technology needs of the administrator. These topics provide an opportunity for reflection and discussion on instructional leadership as it relates to program components and development, program evaluation, and evaluation designs and implementation. Formerly Educational Administration 690B. Three units lecture, one unit fieldwork. *Prerequisites: admission to Professional Administrative Services Credential Program, completion of or concurrent enrollment in Educational Administration 660, or permission of program coordinator.* (4 units)

670. School Law

Seminar on the impact of education law upon the educational administrator and how it can facilitate school leadership. Includes the study of judicial structure and dynamics of law cases and interpretations on administrative settings. Formerly Educational Administration 690C. Three units lecture, one unit fieldwork. *Prerequisites: admission to Professional Administrative Services Credential Program, completion of or concurrent enrollment in Educational Administration 660, or permission of program coordinator.* (4 units)

672. Human Resources Management

Seminar in the theory and function of personnel administration as it relates to instructional leadership in schools. School personnel law is reviewed and applied to understanding of political relationships. Fiscal management of personnel resources as related to strategic planning. Formerly Educational Administration 690D. Three units lecture, one unit fieldwork. *Prerequisites: admission to Professional Administrative Services Credential Program, completion of or concurrent enrollment in Educational Administration 660, or permission of program coordinator.* (4 units)

675. School Business and Facility Management

Seminar on trends and issues in school finance with emphasis on current and innovative procedures including development of a site based budget; fiscal, attendance and student activity accounting; strategic planning; and the planning and utilization of school facilities. Formerly Educational Administration 690E. Three units lecture, one unit fieldwork. *Prerequisites: admission to Professional Administrative Services Credential Program, completion of or concurrent enrollment in Educational Administration 660, or permission of program coordinator.* (4 units)

678. Social and Political Issues in Education

Seminar on the political forces that propel public education at the local, state, and national levels, and the social issues that impact the operation of schools and school districts. Formerly Educational Administration 690F. Three units lecture, one unit fieldwork. *Prerequisites: admission to Professional Administrative Services Credential Program, completion of or concurrent enrollment in Educational Administration 660, or permission of program coordinator.* (4 units)

680. Advanced Field Studies: Evaluation

Exit fieldwork structured to provide the student with an evaluation of progress in the program and development of a plan for continued growth as an effective school leader. *Prerequisites: admission to Professional Administrative Services Credential Program, Educational Administration 660, 664, 667, 670, 672, 675 and 678 or permission of program coordinator.* (4 units)

699. Master's Thesis in Educational Administration

Independent graduate research conducted under the direction of two program faculty members. *Prerequisites: advancement to candidacy, Educational Administration 601, 604, 667, 607, 610, 613, 616, 619, 622, 625 and 628 and permission of program coordinator.* (4 units)

ENGLISH

Master of Arts in English Composition

with concentrations in:
English Composition
Teaching English as a Second Language

Master of Arts in Education

Secondary Education - English option
(Degree requirements can be found on Page 360.)

Department of English

University Hall, Room 334
880-5824

FACULTY: Melissa Axelrod, Rise Axelrod, James Brown, Rong Chen, Milton Clark, Juan Delgado, Margaret Doane, Bertram (Pete) Fairchild, Catherine Gannon, Gregory Gilbert, Bruce Golden, Carol Haviland, Sung-Heh Hyon, Sandra Kamusikiri, Larry Kramer, Loralee MacPike (Acting Chair), E. Clark Mayo, Susan Meisenhelder, E. Philip Page, Elinore Partridge, Renee Pigeon, Dian Pizurie, Kellie Rayburn, Treadwell (Ted) Ruml II, DeShea Rushing, Peter Schroeder, Rodney Simard, Wendy Smith, Edward White, Salaam Yousif

MASTER OF ARTS IN ENGLISH COMPOSITION

Requirements (46 units)

The Master of Arts in English Composition is designed for students interested in pursuing studies in language and writing. The program aims to provide practical experience and techniques in the teaching and/or application of writing in a variety of contexts.

The unique internship component of the English Composition M.A. allows students an opportunity to transfer their knowledge to settings other than public and private schools, thereby enhancing their options for employment in fields other than teaching.

The Master of Arts Concentration in Teaching English as a Second Language provides students the training to meet the needs of the ever growing population of non-native English speakers in the United States. It prepares students specifically for teaching in high school and college ESL programs.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. For the concentration in English Composition, a major in English, or the following courses or their equivalent taken in conjunction with some other major. For the concentration in TESL, the following courses or their equivalents taken either within or in conjunction with a major:
 - A. For the concentration in English Composition:

1. Eng 495. Expository Writing
2. *One of the following:*
 - Eng 311. The English Language
 - Eng 420. Grammar and Linguistics
 - Eng 422. History of the English Language
3. *Two of the following:*
 - Eng 301. Analysis of Poetry
 - Eng 302. Analysis of Drama
 - Eng 303. Analysis of Prose Fiction
4. *One of the following:*
 - Eng 230. English Literature I
 - Eng 231. English Literature II
 - Eng 232. English Literature III
5. *One of the following:*
 - Eng 330. American Literature I
 - Eng 331. American Literature II
 - Eng 332. American Literature III
6. *One of the following:*
 - Eng 475. Shakespeare I
 - Eng 476. Shakespeare II
7. *One of the following:*
 - Eng 401. English Literature of the Middle Ages
 - Eng 403. English Literature of the Renaissance
 - Eng 406. Seventeenth Century Literature
 - Eng 409. English Literature of the Restoration and Eighteenth Century
 - Eng 412. Romantic Prose and Poetry
 - Eng 415. Victorian Literature
 - Eng 442. Modern Poetry
 - Eng 443. Contemporary Poetry
 - Eng 446. Modern Fiction

8. One English elective.

B. For the concentration in Teaching English as a Second Language:

1. Eng 311. The English Language
2. Eng 420. Grammar and Linguistics
3. Eng 495. Expository Writing (or equivalent)
4. Hum 312. Theories of Language Acquisition and Learning
5. Two years of one foreign language or one year each of two foreign languages or passage of language competency exam(s);
2. A grade point average of 3.0 ("B") in all upper-division courses;
3. Completion of the graduate writing requirement;
4. Admission to the program will additionally be based upon evaluation by the English Department graduate committee of the following:
 - A. Three letters of recommendation supporting the student's application. Letters should be from people able to assess the student's competence in both speaking and writing English and foreign language(s). Recommenders also should be able to make relevant comments on the student's likely success in a graduate program in either composition or TESL;
 - and
 - B. A 500-word statement of goals and professional aspirations, to be submitted by the applicant.

Unclassified postbaccalaureate students who have not fulfilled the above requirements may be admitted to the program as conditionally classified graduate students following review by the Department of English graduate committee. To attain fully classified status, such students must satisfy conditions set by the Department of English graduate committee, usually including completion of at least 15 quarter units of appropriate course work at California State University, San Bernardino with a grade point average of 3.0 or better.

Advancement to Candidacy

In order to be advanced to candidacy, the student must have:

1. Achieved classified status;
2. Been accepted by a major advisor selected from the faculty of the Department of English;
3. Completed at least 16 quarter units of applicable course work as a graduate student at this university, with the approval of the major advisor and with a minimum grade point average of 3.0;
4. Submitted a formal program of graduate course work and thesis topic, prepared in consultation with the major advisor and with approval of the Department of English graduate committee;
5. Gained final approval of the program, including thesis topic, and of the candidacy itself by the Dean of Graduate Studies.
6. For students in the English Composition Concentration, demonstrated competence either in a language other than English or in language acquisition. Can be fulfilled by one of the following:
 - A. Satisfactory completion of an equivalent course to a foreign language 150 course or by an examination given by the Department of Foreign Languages;

or
 - B. Satisfactory completion of any course in foreign language and four units of course work in language acquisition, such as Humanities 312. Theories of Language Acquisition and Learning.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable graduate-level work included in the formal program, with no fewer than 33 completed in residence at this university and with at least 32 units gained from 600-level courses in English;
2. Advancement to candidacy for the degree and approval of the specific program of courses and thesis research topic;
3. A grade point average of 3.0 ("B") in all graduate course work and research fulfilling the requirements of the Master of Arts in English Composition and grades of "C" (2.0) or better in all courses in the program;
4. Completion of an acceptable thesis;
5. Any general requirements not cited above and noted on Page 320.

Degree Requirements (46 units)

English Composition Concentration (46 units)

1. Eng 611. Theory of Rhetoric and Composition (4)
2. Eng 615. Discourse Analysis: Theories and Applications (4)
3. Eng 621. Approaches to Imaginative Writing (4)
4. Eng 650. Approaches to Literature (4)
5. Eng 660. Problems in Writing (4)
6. Eng 662. Internship in Composition (2)
7. Eng 690. Research Techniques (4)
8. Eng 695. Thesis Planning (2)
9. Eng 699A. Thesis (2)
10. Eng 699B. Thesis (2)
11. Fourteen units of electives to be chosen with at least twelve units appropriate to the study of writing and suitable to each student's specific goals. Courses may be chosen from upper-division and graduate offerings of any department in the university, subject to advance approval by the English graduate committee.

Teaching English as a Second Language Concentration (46 units)

1. Eng 523. English Syntax (4)
 2. Eng 524. Sociolinguistics (4)
 3. Eng 611. Theory of Rhetoric and Composition (4)
 4. Eng 615. Discourse Analysis: Theories and Applications (4)
 5. Eng 650. Approaches to Literature (4)
 6. Eng 660. Problems in Writing (4)
 7. Eng 662. Internship in Composition (2)
 8. Eng 664. Internship in ESL Composition (2)
 9. Eng 690. Research Techniques (4)
 10. Eng 695. Thesis Planning (2)
 11. Eng 699A. Thesis (2)
 12. Eng 699B. Thesis (2)
 13. *Eight units of electives chosen from:*
 - EEIB 607. Methods and Materials for Teaching English as a Second Language (4)
 - EEIB 612. Social and Cultural Foundations for Language Learning (4)
 - EEIB 613. Cognition and Language Acquisition (4)
 - Eng 605. Special Topics in Language Study (4)
 - Anth 460. Language and Culture (4)
 - Psyc 305. Psycholinguistics (4)
 - Span 415. Comparative Linguistics (4)
- Other upper-division and graduate courses appropriate to this concentration subject to advance approval by the English graduate committee and TESL specialist.

COURSE OFFERINGS IN ENGLISH (Eng)

Upper Division

510. English in the Secondary Classroom

English as a secondary school subject including language, literature and composition. Special emphasis on problems of improving and assessing student writing. *Prerequisites: English 311, 495 and at least two courses from English 301, 302, 303.* (4 units)

513. Advanced Creative Writing

Intensive writing workshop in one genre: poetry, fiction, autobiography or others. Emphasis will change from quarter to quarter. May be repeated for credit as subject matter changes. *Prerequisite: English 317 or 318 or consent of instructor.* (4 units)

515. Senior Seminar in Literature

Advanced study of a selected literary topic, including consideration of critical theory and methodology. May be repeated for credit as topics change. *Prerequisites: senior standing and completion of at least two analysis classes (English 301, 302 or 303), and at least two additional upper-division courses in English.* (4 units)

522. Independent Study in Writing

Projects in advanced writing: fiction, non-fiction, poetry or drama. A total of eight units may apply to the English major or toward graduation. *Prerequisites: English 513 and departmental approval; students must be enrolled in the Creative Writing track and the project must be approved by an instructor.* (4 units)

523. English Syntax

A linguistic approach to the analysis of modern English sentences and their component parts. Emphasis is placed on practical experience in analyzing structures in context. *Prerequisites: English 311 and 420.* (4 units)

524. Sociolinguistics

An examination of language within social and cultural contexts, including ethnic, social and regional dialect variations in the United States. *Prerequisites: English 311 and 420.* (4 units)

525. Seminar in Criticism

Advanced study in special topics in literary criticism. May be repeated for credit as topics change. (4 units)

526. English Phonetics and Phonology

Sounds and sound patterns of spoken English, with special attention to the pronunciation problems encountered by learners of English as a second language. *Prerequisite: English 311.* (4 units)

530. Methods of Tutoring Writing

Study of the theory, principles and methods of tutoring students who need specific practice in writing. Those completing this course with a grade of "B" or better are eligible to participate in tutorial writing services on campus. Students in this class are expected to be proficient writers. May be repeated once for credit. *Prerequisites: English 101 and consent of instructor.* (2 units)

565. Special Studies in Writing

Studies in particular topics in writing, such as assessment, learning theory and research on the teaching of writing. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (2 units)

566. Special Studies in Writing

Studies in particular topics in writing such as assessment, learning theory and research on the teaching of writing. May be repeated for credit as topics change. *Prerequisite: consent of instructor.* (4 units)

575. Internship in English

Supervised learning experience applying English-related skills in a work setting. A total of eight units may be applied toward graduation. Generally assumes 30 hours of work/study per unit of credit. Graded credit/no credit. *Prerequisites: junior standing with at least 16 units of course work in English on this campus with an overall grade point average of 3.0 or better; consent of instructor; and departmental approval of a contract submitted in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

595. Independent Study in Literature, Composition, or Linguistics

Independent study of selected themes, figures, and areas in literature, composition, or linguistics. May be repeated for a maximum of 8 units of credit toward the B.A. in English and toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor, and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

601. Seminar in Poetry

Advanced study in particular kinds of poetry, with special focus on generic issues or problems. May be repeated for credit as topics change. (4 units)

602. Seminar in Dramatic Literature for Stage and Film

Advanced study in particular kinds of dramatic literature and film, with special focus on generic problems and issues. May be repeated for credit as topics change. (Also offered as Theater Arts 602. Students may not receive credit for both.) (4 units)

603. Seminar in Fiction

Advanced study in particular kinds of fiction, with special focus on generic issues or problems. May be repeated for credit as topics change. (4 units)

604. Seminar in Nonfiction Prose

Advanced study in particular kinds of nonfiction prose with special focus on generic issues or problems. May be repeated for credit as topics change. (4 units)

605. Special Topics in Language Studies

Seminar in particular aspects of language studies and their empirical application. May be repeated for credit as topics change. *Prerequisites: English 311 and 420.* (4 units)

611. Theory of Rhetoric and Composition

Traditional and contemporary approaches to rhetoric, composition and style. (4 units)

615. Discourse Analysis: Theories and Applications

A study of contemporary theories of linguistic analysis and their applications to literature and composition. *Prerequisites: English 311 or equivalent and English 611.* (4 units)

621. Approaches to Imaginative Writing

Traditional and contemporary approaches to imaginative writing; emphasis on means of encouraging different styles and modes of expression. *Prerequisite: English 317, 318 or 513 or consent of instructor.* (4 units)

631. Approaches to Professional Writing

Emphasis on writing and teaching the techniques of composing professional reports, abstracts, reviews, and of editing technical manuals and preparing articles for professional journals. (4 units)

650. Approaches to Literature

Study and practice of various critical approaches, such as the moral, formalistic, psychological, archetypal, with particular attention to their assumptions about the meaning and function of literature. (4 units)

651. Seminar in a Literary Period

Advanced study in a specific literary period. May be repeated for credit as topics change. (4 units)

660. Problems in Writing

Seminar in the development of techniques to resolve specific problems of student writing. This course will include an internship component. May be repeated once for credit. *Prerequisite: English 611.* (4 units)

662. Internship in Composition

A practical application of the principles studied in English 660. Supervised tutoring work in practical situations dealing with composition. May be repeated once for credit. *Prerequisites: English 611 and 660.* (2 units)

664. Internship in ESL Teaching

Supervised tutoring work in practical situations focused specifically on problems in working with ESL composition. Generally assumes 30 hours of work/study per unit of credit. May be repeated once for credit. *Prerequisites: English 611 and 660.* (2 units)

666. Seminar in Writing

Studies in particular topics in writing. May be repeated for credit as topics change; a maximum of eight units of credit may be applied to the Master of Arts in English Composition program. *Prerequisite: consent of instructor.* (2 units)

670. Writing Across the Disciplines

Approaches to writing used in disciplines other than English. Emphasis on development of assignments and varying forms of presentation. *Prerequisite: consent of instructor.* (4 units)

690. Research Techniques

Critical study of research methods and resources, including bibliography. Topics covered will be appropriate to a focus on English composition. (4 units)

695. Thesis Planning

Preparation of thesis proposal and annotated bibliography. *Prerequisite or corequisite: English 690.* (2 units)

696. Graduate Independent Study

Advanced research on a specific topic, figure, or area in literature, composition, or linguistics. May be repeated for a maximum of 8 units toward the M.A. in English Composition and graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor, and approval of the graduate coordinator. Proposals must be submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 5 units)

698. Extended Enrollment

Independent study leading to completion of requirements for the master's degree. To maintain continuous enrollment, graduate students who have completed course work should enroll in English 698 until thesis is completed. *Prerequisites: completion of all course work and consent of Graduate Advisory Committee.* (0 unit)

699. Thesis

Topic must be appropriate to a focus on English composition.

A. *Prerequisites: advancement to candidacy, completion of English 695 and approval of graduate coordinator.* (2 units)

B. *Prerequisites: advancement to candidacy, completion of English 695 and approval of graduate coordinator.* (2 units)

HEALTH SCIENCES

Master of Science in Health Services Administration

Department of Health Science and Human Ecology

*Health and Physical Education Building, Room 235
880-5339*

FACULTY: Dorothy Chen, Kim Clark, Sandra Cross, Richard Eberst (Chair), Joseph Lovett (Program Coordinator), David Null, Cindy Paxton, Thomas Timmreck

MASTER OF SCIENCE IN HEALTH SERVICES ADMINISTRATION

Requirements (45 units)

The Master of Science in Health Services Administration is appropriate for students preparing to become health service administrators or managers in hospitals, health maintenance organizations, medical group clinic managers, nursing homes, public health departments, state and federal health agencies, military health services or other health service organizations.

Specific entrance requirements have been established by the university and the Department of Health Science and Human Ecology. Information about the entrance requirements are available at the department office.

Students who wish to design a specific, individualized master's degree related to health science should also consider the M.A. in Interdisciplinary Studies. Students can successfully combine courses from several relevant fields to build interdisciplinary programs serving their career goals in such areas as Community Health Education, Health Promotion, Environmental Health, Occupational Health/Industrial Hygiene, Public Health, and Gerontology. For further information see the M.A. in Interdisciplinary Studies on Page 396.

Students may also earn a certificate in Finance, Accounting, and Information Systems along with the Master of Science in Health Services Administration.

Admission to the M.S. Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. Either A or B below:

- A. A baccalaureate degree in health science;
- B. A related degree, plus completion of the following courses:
 - HSci 371. Community Health Services
 - HSci 415. Medical Care Organizations
 - HSci 451. Principles of Epidemiology
 - HSci 470. Health Behavior
 - Info 309. Information Management
 - Math 305. Statistics: Hypothesis Testing and Estimation

- 2. A minimum grade point average of 3.0 ("B") for the major or for the last 90 quarter units of the bachelor's degree, or at least 12 units of graduate work;
- 3. Completion of the graduate writing requirement;
- 4. Three letters of recommendation, one from the school where the candidate recently graduated, or from someone who can attest to the candidate's academic and scholastic ability in a graduate degree program;
- 5. A double-spaced paper not to exceed three pages providing a biographical sketch of the student's life, background and experiences. Please conclude the paper with a discussion (not to exceed one page) which addresses the reasons for applying to this graduate program plus career goals and aspirations;
- 6. The department's M.S. in Health Services Administration Application Form.

Students who do not meet the above criteria are admitted as conditionally classified graduate students. To attain fully classified status, students must satisfy conditions set by the department's graduate committee, including completion of at least 12 quarter units of appropriate course work at California State University, San Bernardino with a grade point average of 3.0 ("B") or better and removal of deficiencies, if any, including completion of lower-division prerequisite courses.

Advancement to Candidacy

In order to be advanced to candidacy, the student must have:

- 1. Achieved classified status;
- 2. Been accepted by a major advisor from the faculty of the Department of Health Science and Human Ecology who will also accept chairing the student's thesis committee if the thesis option is selected;
- 3. Completed at least 12 quarter units of required course work as a graduate student at this university with approval of the major advisor and with a minimum grade point average of 3.0 ("B");
- 4. Gained a recommendation for advancement to candidacy from the graduate committee of the Department of Health Science and Human Ecology;
- 5. Submitted a formal program of graduate course work prepared in consultation with the major advisor and approved by the Graduate Committee of the Department of Health Science and Human Ecology. The program will include an internship or a thesis topic;
- 6. Gained final approval of the program, including thesis topic (if thesis option is chosen) and of the candidacy itself by the Dean of Graduate Studies.

Requirements for Graduation

In addition to the general requirements of the university and the department:

- 1. A minimum of 45 units of approved graduate-level work included in the formal program, with at least half of the units required for the degree gained from 600-level courses in Health Science and Human Ecology;
- 2. Advancement to candidacy for the degree and approval of the specific program of courses and thesis research topic (if thesis option is chosen);

3. A grade point average of 3.0 ("B"), or better, in all graduate course work and research fulfilling the requirements of the Master of Science in Health Services Administration, and grades of "C" (2.0) or better in all courses in the program;
 4. Either A or B below:
 - A. Completion and defense of an acceptable thesis;
 - B. Completion of the internship with a final project.
- Classified and conditionally classified graduate students in the Master of Science program must complete their degree requirements within five years.

Degree Requirements (45 units)

1. Acct 503. Financial and Managerial Accounting (4)
 2. HSci 598. Research Methodology in Health Science (4)
 3. HSci 600. Seminar in Health and Human Ecology (4)
 4. HSci 610. Organization Management and Planning of Health (4)
 5. HSci 655. Economic and Financial Principles of Health Services (4)
 6. *Four units chosen from:*
 - HSci 630. Administration of Health Care Programs (4)
 - HSci 640. Administration of Health Education Programs (4)
 - HSci 650. Administration of Environmental Management Programs (4)
 7. *Twelve units chosen in consultation with the department advisor from the following:*
 - Econ 590. Seminar in Economics (4)
 - HSci 590. Current Topics in Health Administration and Planning (2)
 - HSci 595E. Independent Study (5)
 - HSci 620. Advanced Topics in Epidemiological Methodology (4)
 - HSci 632. Health Policy and Decision-Making (2)
 - HSci 660. Advanced Topics in Health Science and Human Ecology (2)
 - HSci 670. Directed Readings (5)
 - Info 609. Information Management Systems (4)
 - Mgmt 601. Organization Theory and Behavior (4)
 - Mgmt 640. Methods of Organizational Change (4)
 - Mgmt 641. Personnel Administration (4)
 - Mktg 696. Marketing Strategy (4)
 - POM 611. Production/Operations Strategy (4)
 - POM 613. Advanced Operations Research (4)
 - POM 614. Advanced Quality Management (4)
 - POM 650. Forecasting (4)
 - POM 660. Materials Management and Purchasing (4)
 - PA 462. Public Personnel Administration (4)
 - PA 463. Governmental Budgeting (4)
 - PA 514. Management of Private Nonprofit Organizations (4)
 - PA 564. Local Public Administration (4)
 - PA 568. Accounting for Government and Not-for-Profit Organizations (4)
 - PA 615. Public Financial Management (4)
- or other electives upon approval of major advisor.

8. One of the following options:

Thesis Option

- HSci 699A. Thesis Research and Thesis (3)
- HSci 699B. Thesis Research and Thesis (3)
- HSci 699C. Thesis Research and Thesis (3)

Internship/Project Option

- HSci 697A. Internship in Health Science: Field Work (3)
- HSci 697B. Internship in Health Science: Field Work (3)
- HSci 697C. Internship in Health Science: Field Work and Final Project (3)

COURSE OFFERINGS IN HEALTH SCIENCE (HSci)

Upper Division

525. Health Data Analysis and Demography

Introduction to analysis of health data using statistical procedures, development of skills for determining analytical techniques and procedures for interpretation and presentation of resultant data; examination of sources and evaluation of demographic data and relationships to such topics as fertility, morbidity, mortality, population projection, life tables and migration. *Prerequisites: Health Science 451 and Mathematics 305 or 350 or consent of instructor.* (4 units)

590. Current Topics in Health Administration and Planning

Presentation and analysis of a particular issue or topic in health services administration or planning. May be repeated for credit as topics change. (2 units)

595. Independent Study

Research in special topics including library studies and/or laboratory work under the direction of a faculty member. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 6 units)

598. Research Methodology in Health Science

Research methods and application to contemporary health and environmental problems. Health data analysis and development of skills for determining appropriate analytical techniques and procedures. *Prerequisite: Mathematics 305 or 350 or consent of instructor.* (4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Seminar in Health and Human Ecology

Philosophical foundations of health and human ecology. Historical, contemporary and professional perspectives. (4 units)

610. Organization Management and Planning of Health

Organizational, environmental, socio/political and behavioral aspects of health and health delivery systems. Ecological perspectives on planning and administrative approaches in developing, modifying and sustaining modern health systems. *Prerequisites: Health Science 371 and 600.* (4 units)

620. Advanced Topics in Epidemiological Methodology

Concepts and methodologies of contemporary epidemiology and their relationship to managing and planning health and environmental systems. *Prerequisites: Health Science 451 and 598.* (4 units)

630. Administration of Health Care Programs

Economic forces which impact on health and health delivery systems and an assessment of the distribution of financial resources required to sustain these systems. Emphasis on trends in financing health care and the economic influence of reimbursement policies on financial decision-makers. *Prerequisites: Finance 503 and Health Science 371, 600 and 610.* (4 units)

632. Health Policy and Decision-Making

Issues and problems in the area of health administration. Emphasis on quality assurance, legal aspects, policy development and decision-making as related to health care planning operations. *Prerequisites: Health Science 371, 600 and 610.* (2 units)

640. Administration of Health Education Programs

Current developments in health education related to management and planning of health promotion programs, including strategies to facilitate communication, decision-making and problem solving. *Prerequisites: Health Science 470, 600 and 610.* (4 units)

650. Administration of Environmental Management Programs

Analysis of local, state and national environmental and occupational health programs including program planning and evaluation. Comparative study of international environmental management problems, styles and techniques. *Prerequisites: Health Science 352, 600 and 610.* (4 units)

655. Economic and Financial Principles of Health Services

Micro- and macroeconomic aspects of health services, various payment approaches, third-party reimbursement systems, budgeting and financial analysis, decision-making and planning in health services and organizations. (4 units)

660. Advanced Topics in Health Science and Human Ecology

Analysis of current literature, practices, procedures and issues in health science and human ecology at local, state, national and international levels. May be repeated for credit as topics change. (2 units)

670. Directed Readings

Directed independent study of classic and contemporary writings in a defined area combined with scheduled individual and small group conferences with supervising faculty member. *Prerequisites: graduate standing and consent of instructor.* (5 units)

697. Internship in Health Science

Supervised field work in hospitals, health care facilities, private or public health services or agencies. Students must complete Health Science 697A, 697B, and 697C before any credit can be granted. Each section requires 240 contact hours.

- A. Field Work. *Prerequisite: completion of at least 24 units of approved course work toward graduation.* (3 units)
- B. Field Work. *Prerequisite: Health Science 697A.* (3 units)
- C. Field Work and Final Project. *Prerequisite: Health Science 697B.* (3 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the master's degree. Students enrolled in this course will have full use of university facilities. *Prerequisites: advancement to candidacy and consent of department.* (0 units)

699. Thesis Research and Thesis

Independent graduate research conducted under the guidance of the major department advisor and resulting in thesis and successful defense. *Prerequisites: Health Science 598, 600 and advancement to candidacy.*

- A. (3 units)
- B. (3 units)
- C. (3 units)

INTERDISCIPLINARY STUDIES

Master of Arts in Interdisciplinary Studies

Office of the Dean of Graduate Studies

Administration Building, Room 127
880-5058

The university offers a limited number of courses outside of its department and school structure. Also offered as interdisciplinary studies are the certificate programs in international relations and bilingual/cross-cultural studies. See Pages 273 and 105.

MASTER OF ARTS IN INTERDISCIPLINARY STUDIES

Requirements (48 units)

Occasionally a student wishes to pursue special interests or career goals that are not met by existing graduate programs. For this student, the Master of Arts in Interdisciplinary Studies offers the opportunity to create a unique master's degree program or one that is not otherwise substantially available in a current graduate program offered at this university.

Examples of such programs could include:

Human Services (social work, administration, criminal justice),

Humanities (combining various disciplines such as theatre arts and music),

Images of Women in Culture (art, literature, anthropology),

Liberal Studies (combining disciplines from the humanities and social sciences),

Social Gerontology (sociology, psychology, administration).

This individualized master's degree is designed to be a highly challenging academic program for the self-motivated student who has a clear perception of objectives and a background which will allow advanced study in the disciplines combined in the program. The Interdisciplinary Studies M.A. is designed to accommodate unique student interests or to prepare students for fields which require programs not presently offered at the university. It is not a replacement of existing degree programs but an enrichment of the university's offerings. This program is designed by the student in consultation with the Dean of Graduate Studies and three faculty members. The three faculty members, who comprise the student's faculty committee, are selected from more than one academic discipline. Once the program is approved by the committee, it is then submitted to the University Curriculum Committee for its approval.

The **Integrative Studies Track** is directed primarily to experienced teachers who are currently in elementary, middle school and high school settings. This option under the M.A. in Interdisciplinary Studies reflects the desire of many faculty across schools and departments to work together to provide an informed approach to interdisciplinary inquiry and its subsequent integration into educational environments. This option is more than just an interdisciplinary proposal. It seeks to go beyond cursory knowledge of disciplines to substantive inquiry which connects and synthesizes various perspectives. Teachers at all levels and throughout all disciplines are required to create learning environments which delve deeply into substantive content, engage students in critical processing and reflection, integrate disciplinary perspectives and complex experiences in which assessment is related to real-world contexts. This graduate program provides an alternative form of professional education for teachers. Rather than a completely individualized plan, the Integrative Studies track requires six designated courses with the remaining course work taken outside the School of Education.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A cumulative undergraduate grade point average of at least 2.5 overall and at least 3.0 ("B") in the major;
2. Completion of the graduate writing requirement;
3. Prerequisite of at least five upper-division courses, each with a grade of "B" (3.0) or better, in the major discipline of the proposed program. The determination of the major discipline is subject to the approval of the University Curriculum Committee;
4. A three-member faculty committee, the chair of which serves as primary advisor, to supervise the course of study;
5. An interdisciplinary studies M.A. proposal submitted, on forms available from the Office of the Dean of Graduate Studies, to the University Curriculum Committee; the program of courses must not significantly duplicate any existing degree program on this campus or on any other state college or university campus within a commutable distance; no more than 20 units of proposed coursework can be taken prior to submission of the proposal to the University Curriculum Committee;
6. Approval of the program proposal by the University Curriculum Committee.

If approval is recommended by the University Curriculum Committee, the student is formally admitted into the program in either conditionally classified or classified status.

Requirements for Graduation

1. The program of study should be interdisciplinary, including course work from at least two disciplines represented at the university;
2. The program of study must include a minimum of 48 quarter units of course work, at least 70% of all course work taken must be in 600-level courses;

3. The program of study must not include more than eight units of independent study course work, excluding the units allowed for thesis or project;
4. The program must include a synthesizing experience (comprehensive examination, project or thesis). The project or thesis will include an oral defense. Students may register for no more than nine units of thesis or project credit;
5. The program of study must include a course in research methods in the major discipline;
6. A grade point average of 3.0 ("B") must be earned in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program. Grades of "C-" (1.7) or less cannot be used toward the degree;
7. When students have completed between 12 and 20 units of course work on an approved study plan, it will be necessary for them to submit a formal letter to the Office of the Dean of Graduate Studies requesting advancement to candidacy;
8. Any additional general requirements not cited above and listed on Page 320.

M.A. INTERDISCIPLINARY STUDIES (INTEGRATIVE STUDIES TRACK)

Requirements (48 units)

Degree Requirements (48 units)

First year requirements

1. Educ 695. Foundations of Education (4)
2. EELB 542. Seminar in Elementary/Bilingual Education (1 to 4)
3. ERdg 633. Comprehension Through Alternate Communication Systems (4)

Second year requirements

1. Educ 663. Introduction to Educational Research (4)
2. ESec 699. Secondary School Curriculum (4)
3. ETec 682. Interactive Multimedia (4)
4. *Choose one of the following:*
 - IS 696. Graduate Project (1 to 9)
 - IS 699. Graduate Thesis (1 to 9)

Note: Students will be directed to register in specially designated sections of the above courses.

Electives

Twenty-four units of individually selected coursework will be taken outside of education, as scheduled and approved by the student and faculty advisor.

COURSE OFFERINGS IN INTERDISCIPLINARY STUDIES (IS)

Students in the M.A. in Interdisciplinary Studies program may use one of the following courses for graduate level independent study: Education 601, Administration 695, Humanities 695, Natural Sciences 695, Social Sciences 695.

Graduate/Postbaccalaureate

May not be taken by undergraduate students

696. Graduate Project

Preparation of the project for the M.A. under the direction of a faculty member from the student's committee and if an interdisciplinary studies major, with approval of the Dean of Graduate Studies. Maximum of nine credits applicable toward the M.A. *Prerequisite: advancement to candidacy.* (Credit to be arranged: 1 to 9 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the Master of Arts degree. Students enrolled in this course have full use of university facilities. To retain classified standing in the master's program, a student must enroll in this course each quarter until the project or thesis is accepted or the comprehensive exam passed. *Prerequisites: advancement to candidacy, approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies.* (0 unit)

699. Graduate Thesis

Preparation of the thesis for the Master of Arts under the direction of a faculty member from the student's committee and if an interdisciplinary studies major, with approval of the Dean of Graduate Studies. Maximum of nine credits applicable toward the Master of Arts. *Prerequisite: advancement to candidacy.* (Credit to be arranged: 1 to 9 units)

MATHEMATICS

Master of Arts in Mathematics

Department of Mathematics

Jack Brown Hall, Room 370
880-5361

FACULTY: Susan Addington, Joseph Chavez, Hajrudin Fejzic, Davida Fischman, Christopher Freiling, Gary Griffing, J. Terry Hallett, Zahid Hasan, Denis Lichtman, Dolores Matthews, Jim Okon, Chetan Prakash, Dan Rinne, John Sarli, Charles Stanton, Joel Stein, Robert Stein, Roland Trapp, Belisario Ventura, Paul Vicknair (Chair), Peter Williams

MASTER OF ARTS IN MATHEMATICS

Requirements (48 units)

The Master of Arts degree in Mathematics is a flexible program that allows students to tailor their program to suit their individual career goals. The program provides a breadth of mathematics not feasible within the requirements for a mathematics major and also provides the opportunity for courses in mathematics education. The Community College Teaching/General Track emphasizes mathematics content courses and is also appropriate for students considering more work in mathematics. Students seeking greater mathematical breadth before entering a doctoral program should select a program of 500- and 600-level mathematics courses. While both tracks meet the minimum state requirements for community college teaching, students wishing to prepare for community college teaching, should select a program with at least 36 units of mathematics content courses. The Mathematics Education Track is especially appropriate for teachers at the K-12 level. Careful advising is essential to ensure that prerequisites for courses are met, and that the course work selected is appropriate for the career goals.

Admission to the Program

In addition to the general requirements of the university, which include a baccalaureate degree from an accredited college, specific requirements for admission to the program are:

1. **Community College Teaching/General Track:**
Successful completion with a grade of at least "B" (3.0) of course work in calculus, abstract algebra, analysis, number theory and probability deemed equivalent to the core of the mathematics major at California State University, San Bernardino.
- Mathematics Education Track:**
Successful completion with grade of at least "B" (3.0) of course work in calculus, linear algebra, analysis and proof, number theory and probability deemed equivalent to the core of the mathematics minor at California State University, San Bernardino.

Students who do not meet these criteria may be admitted as conditionally classified graduate students following review by the Department of Mathematics Graduate Committee.

2. Submission of a completed M.A. in Mathematics application form;
3. Completion of the graduate writing requirement;
4. Three letters of recommendation;
5. A letter of not more than three pages, outlining background, experience and interests. Be sure to include reasons for seeking admission to this program and career goals.

Advisors

Each graduate student will be assigned an advisor who, in conjunction with the student, will establish an appropriate course of study. This committee must approve the student's specific program of courses based on the student's preparation and interests. In the latter part of the program, a student will also need a project advisor. Such an advisor should be selected at least one quarter before enrolling in the course Mathematics 600. Graduate Project, required of all master's candidates. Guidelines for submitting a proposal for Mathematics 600 are available from an advisor or the department office.

Advancement to Candidacy

In order to be advanced to candidacy, the student must:

1. Achieve classified status;
2. Submit a formal program of graduate work prepared in consultation with and approved by the departmental graduate committee;
3. Complete at least 15 quarter units and not more than 20 units of applicable work as a graduate student at this university, with a grade point average of at least 3.0 ("B");
4. Gain final approval of the program and of the candidacy itself by the Dean of Graduate Studies.

Requirements for Graduation

1. Advancement to candidacy for the degree;
2. A minimum of 48 quarter units of acceptable graduate level work as specified below in the formal program under either the Community College Teaching/General Track or the Mathematics Education Track;
3. No less than 32 units completed in residence at this university;
4. A grade point average of at least 3.0 ("B") in the program and at least a "B" (3.0) grade in the core courses;
5. Any additional general requirements not cited above and listed on Page 320.

Degree Requirements (48 units)

Core Courses (16 units)

1. Math 604. Seminar in Problem Solving I (4)
2. Math 614. Studies in Geometry (4)
3. Math 616. Studies in Algebra (4)
4. Math 618. Studies in Analysis (4)

*Electives (28 units)***Community College Teaching/General Track**

Twenty-eight units of electives selected as follows:

1. At least 12 units from approved 600-level mathematics courses.
2. A minimum of 16 additional units in approved mathematics courses at the 400-, 500-, or 600-level not included in the core of the mathematics major or used to satisfy any other requirements in the master's program. One of these courses may be replaced by Secondary Education 666 or 672.

Mathematics Education Track

Twenty-eight units of electives selected from the following and including at least 12 units at the 600-level:

1. ESec 666. Techniques and Application of Mathematics Education (4)
2. ESec 672. Educational Assessment in Mathematics Teaching (4)
3. Approved 400-level courses in mathematics not in the core of the major.
4. Approved 500- or 600-level courses in mathematics not used to satisfy any other requirement.

Graduate Project (4 units)

Math 600. Master's Degree Project (4)

COURSE OFFERINGS IN MATHEMATICS (Math)

Upper Division**510. Topics in Mathematics**

Study of selected areas of advanced mathematics. May be repeated for credit with consent of instructor as topics change. *Prerequisite: senior or graduate standing.* (4 units)

529. Advanced Geometry

Topics in affine and projective geometry with applications to Euclidean 2 and 3 space and to modern algebra. Formerly Mathematics 539. *Prerequisites: Mathematics 331 and 345.* (4 units)

545. Abstract Algebra I

An introduction to algebraic structures, including groups, rings and fields. Formerly Mathematics 570A. *Prerequisites: Mathematics 331 and 345.* (4 units)

546. Abstract Algebra II

Continuation of Mathematics 545. Formerly Mathematics 570B. *Prerequisite: Mathematics 545 (or 570A).* (4 units)

553. Analysis I

Continuous and differentiable functions, infinite series. Uniform convergence, computation with series, functions represented by integrals, theory of integration. Formerly Mathematics 550A. *Prerequisites: Mathematics 252 (or 203), and 355.* (4 units)

554. Analysis II

Continuation of 553. Formerly Mathematics 550B. *Prerequisite: Mathematics 553 (or 550A).* (4 units)

555. Introduction to Point-Set Topology

Topics to include topological and metric spaces, compactness, product spaces, connectedness, separation properties. Formerly Mathematics 560C. *Prerequisite: Mathematics 355.* (4 units)

557. Complex Variables

Analytic and harmonic functions, power series, Cauchy's Theorem and Cauchy's Formula. Formerly Mathematics 560B. *Prerequisites: Mathematics 252 (or 203), 355 and 553 (or 550A).* (4 units)

565. Mathematical Statistics

Likelihood ratio, estimators, distributions of estimators, theory of hypothesis testing, linear statistical models. Formerly Mathematics 445. *Prerequisite: Mathematics 465 (or 340).* (4 units)

573. Mathematical Methods of Physics III

A continuation of Mathematics 473 or Physics 473 with emphasis on advanced topics including calculus of variations, tensor analysis, and elliptic functions. Additional topics chosen from functions of a complex variable, integral transforms and probability. (Also offered as Physics 573. Students may not receive credit for both.) *Prerequisites: Mathematics 331, 473 (or 425) or Physics 473 or (425), and at least one 300-level physics course.* (4 units)

576. Introduction to Mathematical Models

Topics from linear and probabilistic models, computer simulation, difference and differential equation models. Formerly Mathematics 341. *Prerequisites: Computer Science 201, Mathematics 331 and 465 (or 340).* (4 units)

595. Independent Study

An independent study course for senior mathematics majors. *Prerequisites: Mathematics 331 and 553 (or 550A), a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Master's Degree Project

Graded credit/no credit. *Prerequisites: graduate standing and consent of the graduate coordinator.* (4 units)

604. Seminar in Problem Solving I

Topics in mathematics to illustrate development of higher order thinking skills including problem solving, geometric and symbolic techniques, role of computers, discovery methods, the role of proof. Selection of texts and other materials, curricular and classroom organization, evaluation. *Prerequisites: Mathematics 252, 331, and 372.* (4 units)

605. Seminar in Problem Solving II

Continuation of Mathematics 604. *Prerequisite: Mathematics 604.* (4 units)

606. Seminar in Problem Solving III

Continuation of Mathematics 605. *Prerequisite: Mathematics 605.* (4 units)

610. Topics in Mathematics

Study of selected areas of advanced mathematics to be determined by the instructor. May be repeated for credit with consent of instructor as topics change. *Prerequisite: graduate standing.* (4 units)

611. Operations Analysis

Scientific approach to the resolution of operational problems. Structure and function of models and decision strategy commonly used in national policy analysis including measures of effectiveness, uncertainty and the misuse of modeling. (Also offered as Management Science 611. Students may not receive credit for both.) May not be counted toward fulfilling the requirements in the mathematics major. *Prerequisite: one of the following: Management Science 210, Psychology 210, Social Science 215, Mathematics 305 or 350 or equivalent.* (4 units)

614. Studies in Geometry

Advanced topics in affine, projective, elliptic, and hyperbolic geometry. Comparison of synthetic and analytic methods of proof. *Prerequisites: Mathematics 529 (or 539), 545 (or 570A) and admission to the M.A. in Mathematics Program.* (4 units)

616. Studies in Algebra

Advanced topics in algebra to include constructability, transcendence and solvability of groups and equations. *Prerequisites: Mathematics 546 (or 570B) and admission to the M.A. in Mathematics Program.* (4 units)

618. Studies in Analysis

Theory of multivariable calculus with applications, to include the Inverse Function Theorem, as well as Stokes' and Green's theorems. *Prerequisites: Mathematics 553 (or 550A); either 554 (or 550B), 555 (or 560C), or 557 (or 560B); and admission to the M.A. in Mathematics Program.* (4 units)

678. Teaching Practicum

Supervised practice in individual and/or classroom teaching. May be repeated for a total of four units. *Prerequisite: admission to the master's program in teaching with a major in mathematics.* (2 units)

695. Graduate Independent Study

An independent study course for graduate students in mathematics. *Prerequisites: advancement to candidacy in the M.A. in Mathematics program; a G.P.A. of at least 3.5 in courses in the program; consent of the instructor and approval by the graduate committee. A written proposal for a project must be submitted to the graduate committee no later than the ninth week of the quarter preceding that in which the independent study is to be pursued.* (Credit to be arranged; 2 to 4 units)

698. Extended Enrollment

Independent study leading to completion of requirements other than course work for the M.A. degree. Students enrolled in this course have full use of university facilities. Continuous enrollment in this course must be maintained until all requirements for the master's degree have been satisfied in order for students to retain their classified standing. *Prerequisites: advancement to candidacy and consent of department.* (0 unit)

NATIONAL SECURITY STUDIES

Master of Arts in National Security Studies

National Security Studies Office

*Pfau Library, Room 236
880-5534*

March Air Force Base

*Education Center, Building 449
653-1135*

FACULTY: Mark Clark (Director), Ralph Salmi

MASTER OF ARTS IN NATIONAL SECURITY STUDIES

Requirements (46 units)

The Master of Arts in National Security Studies is a professionally oriented, interdisciplinary, graduate-level program housed within the School of Social and Behavioral Sciences. The program is designed to develop an understanding of the substance and principles of defense policy analysis, strategic planning and arms control in relation to the contemporary international environment. Flexibility within elective courses permits the student to emphasize research in national security issues of his or her special interests.

The program is relevant to established career personnel in defense analysis and related specialties, the military services, the civil service and the intelligence community. Additionally, the program is structured to provide motivated persons holding a Bachelor of Arts degree and/or Bachelor of Science degree from an accredited institution with the higher educational skills necessary for entry into the above mentioned career fields or to pursue doctoral studies.

The program is intended for evening students primarily and, therefore, classes are predominantly scheduled between 6 and 10 p.m. The entire program is also offered off-campus at March Air Force Base in Riverside. Once matriculated, students can take courses at either site.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A baccalaureate degree from an accredited college or university;
2. Satisfy the National Security Studies graduate admissions committee that sufficient preparation and a satisfactory course of study has been pursued in preparation for graduate study. The committee may require and will notify individual applicants if the GRE General Test is required (If the test is required and the GRE test results

are not received in time for the entry term, admission will be in conditionally classified graduate standing.);

3. A minimum cumulative undergraduate grade point average of at least 2.5 overall and at least 3.0 ("B") in the student's undergraduate major;
4. Completion of the graduate writing requirement;
5. Competence in the following prerequisite courses or their equivalents:

Math 110.	College Algebra
PSci 203.	American Government
PSci 484.	National Security Policy (prerequisite for the core courses)

Competence in these areas may be demonstrated by:

A. Formal completion of the course or its equivalent,

OR

B. Credit by examination (Not applicable to Political Science 484. National Security Policy.);

6. Submission to the National Security Studies Admissions Committee of a brief statement (one or two double-spaced typewritten pages) of the student's preparation for graduate study and professional aspirations following receipt of the master's degree;
7. Submission of three letters of recommendation from individuals familiar with the student's academic or professional work and potential to complete the program successfully. Letters must come directly from the writer on National Security Studies forms.

Students who meet the requirements for admission to graduate study, but who do not meet the program requirements, may be admitted to graduate study in unclassified postbaccalaureate status or to the program in conditionally classified graduate standing. When the specified deficiencies are removed, student status is changed from conditionally classified to classified. (Unclassified postbaccalaureate students may enroll, when space is available, in selected graduate courses.) No more than 20 quarter units of national security studies course work taken as an unclassified or conditionally classified graduate student may be applied to the program as a classified graduate student.

Advancement to Candidacy

To be advanced to candidacy, a student must have:

1. Achieved classified status;
2. Selected a graduate advisor to supervise the course of study;
3. Completed at least 16 quarter units of national security studies program course work at this university, and achieved a minimum grade point average of 3.0 ("B") in those courses;
4. Filed a graduate program approved by the student's advisor, the national security studies program director and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 46 quarter units of acceptable graduate-level work, with at least 36 quarter units completed in residence at California State University, San Bernardino. Thirty-two quarter units must be in 600-level courses and 12 units outside of political science. Students enrolling in approved 300- or 400-level elective courses must enroll concurrently in a two-unit graduate-

- level independent study course;
- 2. A grade point average of at least 3.0 ("B") in all national security studies program courses taken;
- 3. Choose Option A or B:
 - A. Completion of acceptable comprehensive final written and oral examinations;
 - B. Completion and defense of an original master's thesis;
- 4. Any additional general requirements not cited above and listed on Page 320.

Classified graduate students in the Master of Arts program must complete their degree requirements within five years of admission to the program. Students in classified status who fail to register for at least one course in the program each quarter will automatically be declassified. Political Science 698. Extended Enrollment must be taken if another course is not taken during a given quarter.

The instructor in each 600-level course will complete an evaluation of each student's performance and potential to complete the program successfully. These evaluations will be reviewed by the program director and maintained in the student's file for early consultation with the student about his or her future prospects in the program.

The Master of Arts in National Security Studies is a thesis option course of study requiring either written and oral comprehensive examinations (to be taken no earlier than in the last quarter of program course work) or a thesis. Students with less than a 3.0 grade point average in the program will not be permitted to take the examinations. The comprehensive examination committee for each candidate will consist of the director of the national security studies program and two faculty teaching in the program, as mutually agreed between the candidate and faculty.

Comprehensive Examination

The written and oral examinations will cover four areas:

- 1. The required courses,
- 2. A field in which the student has done research or completed course work,
- 3. A second field in which the student has done research or completed course work,
- 4. A third field from the national security studies required reading list.

The examinations will be graded credit/no credit.

An oral examination by the student's committee follows successful completion of the written examination. The oral examination is open for public attendance, but not participation. Should the candidate fail one or more written or oral examination areas, the entire oral or written examination may be repeated one time after remedial course work or study is completed. The scope and deadline for completion of this remedial work will be determined by the student's examination committee at a post-examination conference.

Students must enroll in the Political Science Comprehensive Examination.

Thesis

The criteria for determining who will be allowed to choose the thesis option will be determined by the proposed thesis committee. After completion of a minimum of 30 quarter units, the student will request three faculty to form a preliminary committee, at least two of whom have instructed a course that the student has taken in the program.

Students interested in pursuing further graduate work are strongly encouraged to pursue the thesis option.

Prerequisite courses (12 units)

- Math 110. College Algebra (4)
- PSci 203. American Government (4)
- PSci 484. National Security Policy (4)

Degree Requirements (46 units)

- 1. PSci 600. Theory and History of Strategy (4)
- 2. PSci 601. Strategic Systems and Strategic Thought (4)
- 3. PSci 602. Regional Security (4)
- 4. *Four units chosen from:*
 - Math 611. Operations Analysis (4)
 - PA 671. Defense Budgeting and Management (4)

Note: Math 611 requires a prerequisite of a statistics course.
- 5. *Thirty units of electives chosen from the following: (16 units must be 600-level; 12 units must be from courses other than Political Science courses)*
 - Comm 611. Briefings and Presentations (4)
 - Econ 630. International Economic Issues (4)
 - Eng 631. Approaches to Professional Writing (4)
 - Geog 609. Seminar in the Geography of the Former and Post-Soviet Union (4)
 - Geog 621. Seminar in the Geography of Latin America (4)
 - Hist 556. Foreign Relations of the United States (4)
 - Hist 603. Seminar in Modern Military History (may be repeated for a maximum of eight units.) (4)
 - Math 611. Operations Analysis (if not taken as a required course listed above.) (4)
 - NSci 486. Science, Technology and Warfare (4)
 - PA 671. Defense Budgeting and Management (if not taken as a required course listed above.) (4)
 - PSci 304. Communist Political Systems (4)
 - PSci 325. American Foreign Policy (4)
 - PSci 590. Seminar in International Relations: Naval Strategy/Maritime Policy (4)
 - PSci 604. Seminar in International Law (4)
 - PSci 605. Topics in Strategy (may be repeated for a maximum of eight units.) (4)
 - PSci 609. International Relations Theory (4)
 - PSci 698. Extended Enrollment (0)
 - PSci 699. Thesis (2) for a maximum of (8)
 - SSci 695B. Directed Graduate Studies (may be repeated for a maximum of ten units.) (2)

May choose only one of the following:

- Soc 369A. Military Sociology: Comparative
Military Sociology (2)
MilS 369A. Military Sociology: Comparative
Military Sociology (2)

May choose only one of the following:

- Soc 369B. Military Sociology: American
Military Sociology (2)
MilS 369B. Military Sociology: American
Military Sociology (2)

Soc 606. Sociology of Terrorism (4)

Note: Concurrent enrollment in a related 2-unit independent study (SSci 695) course is required for each of the following courses chosen as an elective:

- MilS 369A. Military Sociology: Comparative Military Sociology (2)
MilS 369B. Military Sociology: American Military Sociology (2)
NSci 486. Science, Technology and Warfare (4)
PSci 304. Communist Political Systems (4)
PSci 325. American Foreign Policy (4)
Soc 369A. Military Sociology: Comparative Military Sociology (2)
Soc 369B. Military Sociology: American Military Sociology (2)

6. Successful completion of the comprehensive written and oral examinations or defense of an original master's thesis.

Internship

Some internships in government service are occasionally available on a competitive basis. Other non-profit, research internships are available.

Transfer Credit

A maximum of 10 quarter hours of acceptable postbaccalaureate credit taken at an accredited institution of higher learning may be applied toward the requirements for the M.A. in National Security Studies. Selected Department of Defense courses (War College, Command and Staff College and Squadron Officers School) have been approved for transfer credit. Determination of acceptability of transfer credit requests is made upon receipt of official transcripts by the Office of Admissions and Records and upon recommendation of the director of national security studies.

PSYCHOLOGY

Master of Arts in Psychology

with concentrations in:

General-Experimental Psychology
Life-Span Development Psychology

Master of Science in Psychology

with concentrations in:

Clinical Psychological
Industrial/Organizational

Department of Psychology

Physical Sciences Building, Room 219
880-5570

FACULTY: David Chavez, Yu-Chin Chien, Gloria Cowan, Robert Cramer, Stuart Ellins, Janelle Gilbert, Diane Halpern, Chuck Hoffman (Chair), Laura Kamptner, Elizabeth Klonoff, Hideya Koshino, Janet Kottke, Marsha Liss, Faith McClure, Sanders McDougall, Kelly Morton, Fred Newton, Hannah Nissen, Robert Ricco, David Riefer, Matt Riggs, Kenneth Shultz, Geraldine Stahly, Edward Teyber, Michael Weiss, Eugene Wong, Joanna Worthley

MASTER OF ARTS IN PSYCHOLOGY

Requirements (51 units)

The objective of the Master of Arts in Psychology is to provide a program of study with courses selected from a variety of basic areas in psychology. Students will select one of the following two concentrations as their area of specialization:

1. *General-Experimental Psychology Concentration* provides a broad background suitable for entry into doctoral programs and employment requiring a Master of Arts in Psychology;
2. *Life-Span Developmental Psychology Concentration* provides a background suitable for careers dealing with children, families, or older adults.

Although each of these concentrations differs in emphasis, both will prepare students for doctoral programs and career objectives such as teaching in a community college.

Admission to the M.A. Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A baccalaureate degree with a major in psychology; or with any other undergraduate major;
 - A. Score at least at the 50th percentile on the GRE advanced test in psychology;

OR

 - B. Satisfy the graduate admissions committee of the Department of Psychology that a satisfactory course of study has been pursued in preparation for graduate study in psychology;
2. A cumulative undergraduate grade point average of at least 3.0 ("B") overall and in the major;

3. Submission of scores for verbal, quantitative, and psychology on the Graduate Record Examination;
4. Completion of the graduate writing requirement;
5. A brief statement describing preparation for graduate study, the goals of graduate study and professional aspirations, to be submitted to the department;
6. Three letters of recommendation, with at least two from former professors. Letters should come directly from the writers or be included in a placement file. (It is the applicant's responsibility to determine if letters have been received.)
7. Satisfaction of the prerequisites of one of the following areas of concentration:
 - A. General-Experimental Psychology concentration, the following prerequisites or their equivalent:

Psyc 100.	Introduction to Psychology
Psyc 210.	Psychological Statistics
Psyc 311.	Introduction to Experimental Psychology
 - B. Life-Span Developmental Psychology concentration, the following prerequisites or their equivalent:

Psyc 100.	Introduction to Psychology
Psyc 210.	Psychological Statistics
Psyc 311.	Introduction to Experimental Psychology

A course in developmental psychology.

Students who meet the general requirements of the university for admission to graduate study, but who do not meet the Psychology Department's specific requirements for admission to classified status or who wish to take course work prior to spring quarter consideration of their application for classified status, may be admitted to the university in the unclassified postbaccalaureate status. Unclassified postbaccalaureate students may enroll, with consent of the Psychology Department, in selected graduate courses.

Advancement to Candidacy

At the end of the spring quarter, all first year graduate students will be evaluated to determine whether or not they will be advanced to candidacy for the Master of Arts degree. Students will be reevaluated each quarter until they are either advanced to candidacy or declassified.

To be formally advanced to candidacy, a student must to the satisfaction of the chairman of the department have:

1. Achieved classified status;
2. Successfully completed 16 units of course work in the program and maintained a 3.0 ("B") grade point average in the course work;
3. Selected a graduate advisor to supervise the course of study;
4. Satisfied the ethical requirements of the American Psychological Association;
5. Filed an approved graduate program which must have the approval of the student's advisor, the department chair or the graduate program director and the Dean of Graduate Studies;
6. Demonstrated successful research participation with a faculty advisor. Success will be determined by a passing grade in Psychology 611A (2 units). (Psychology 611B (3 units) will be reserved for the completed thesis

proposal after advancement.) This two unit requirement can be fulfilled in one of three ways:

- A. Student will be required to become familiar with the literature in a research area which will be related to their thesis research. This could take the form of a partial literature review, an annotated bibliography and/or a presentation of the literature of interest to faculty/student groups.
- B. Student will be required to become familiar with several related research literatures if their area of interest is currently undeveloped or if specialized knowledge of particular methodologies requires further investigation for the development of a thesis project.
- C. Student will be required to become skilled in certain specialized research methods which will pertain to their abilities to gather data for the thesis. Examples of such activities could include gathering pilot data to acquire interview skills, knowledge of survey procedures, assessment skills, advanced statistical skills, understanding of content analysis, skills to work with a special population, or advanced physiological measurement skills.

Requirements for Graduation

1. A minimum of 51 quarter units of approved graduate-level work, with 38 completed in residence at this university;
2. A grade point average of at least 3.0 ("B") in all courses taken to satisfy the Master of Arts degree, grades of "B-" (2.7) or better in each required course in the program, and grades of "C" (2.0) or better in each elective course;
3. Successful completion of the course work listed below, including a culminating experience consisting of the completion and defense of an original master's thesis;
4. Any additional general requirements not cited above and listed on Page 320.

Classified graduate students in the Master of Arts program must complete their degree requirements within five years of admission to that program. Students in classified status who fail to register for at least one course in the Psychology M.A. program each quarter will automatically be declassified. Psychology 698 (Extended Enrollment) may be taken if another course is not taken during a given quarter.

Degree Requirements (51 units)

1. Psyc 611. Advanced Independent Study (2 to 5) for a total of (5)
2. Psyc 640. Advanced Methods in Psychological Research (4)
3. Psyc 641. Advanced Psychological Statistics (5)
4. Psyc 642. Applied Problem Analysis (4)
5. Psyc 699. Thesis (5)
6. *Twenty-eight units from one of the following concentrations, chosen in consultation with an advisor:*

General-Experimental Psychology Concentration

1. Psyc 650. Advanced Cognitive Psychology (4)
2. Psyc 652. Advanced Learning and Motivation (4)

3. Psyc 654. Advanced Life-Span Developmental Psychology (4)
4. Psyc 656. Advanced Physiological Psychology (4)
5. Psyc 658. Advanced Personality and Social Psychology (4)
6. Eight units of Psychology 500- or 600-level courses, excluding Psychology 595, 611, 612 and 689.

Life-Span Developmental Psychology Concentration

1. Psyc 654. Advanced Life-Span Developmental Psychology (4)
2. Psyc 655. Advanced Seminar in Developmental Psychology (4) for a total of (8)
3. Psyc 664. Applied Life-Span Developmental Psychology (4)
4. *Eight units chosen from:*
 - Psyc 645. Advanced Infancy and Early Childhood Development (4)
 - Psyc 646. Advanced Middle Childhood and Adolescent Development (4)
 - Psyc 647. Advanced Adulthood and Aging Development (4)
5. Four units of electives chosen in consultation with an advisor and approved by the director.

MASTER OF SCIENCE IN PSYCHOLOGY

Requirements

**Counseling Thesis Option—82 units,
Counseling Comprehensive Examination
Option—78 or 79 units,
Industrial/Organizational Thesis
Option—82 units**

The areas of concentration for the Master of Science degree program are clinical/counseling psychology or industrial/organizational psychology.

The principal objective of the clinical/counseling program is to provide students with practical skills in counseling, through supervised training and experience, and an understanding of relevant subject matter knowledge and research methodology. The program culminates with a thesis or comprehensive examination and an internship experience. The program is designed to meet the basic requirements of California Assembly Bill no. 3657 (Section 4980.37) which specifies educational qualifications for licensure as marriage, family and child counselors.

The principal objective of the industrial/organizational program is to provide students with the skills to apply the principles and methods of psychology to organizations, public and private, and to settings where people are engaged in work. To be successful in this application, the graduate must have developed knowledge and appreciation of psychological theory and research as they apply to organizations and people at work, and mastery of the measurement and research technologies which are commonly used in the discipline.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A minimum cumulative undergraduate grade point average of 2.5;
2. A minimum cumulative undergraduate grade point average in the major of 3.0 ("B");
3. A baccalaureate degree in psychology;
or
one of the following:
 - A. A baccalaureate degree in a major other than psychology and score at or above the 50th percentile on the Graduate Record Examination (advanced test in psychology);
 - B. A baccalaureate degree in a major other than psychology, including a course of study judged, by the Psychology Department graduate admissions committee, to be satisfactory preparation for graduate study in psychology;
4. Completion of the graduate writing requirement;
5. Submission to the department graduate admissions committee of a brief statement (one or two typewritten pages) of the student's preparation for graduate study, goals in a graduate training program and professional aspirations following receipt of the master's degree;
6. Submission of three letters of recommendation from people who are in a position to make relevant comments on the student's likely success in a graduate psychology program. At least two of these letters should be from former professors who are familiar with the student's scholarly activities.

For students seeking admission in the Industrial/Organizational Psychology Option, the following also are required for classified status:

7. Completion of the following prerequisite courses or their equivalent:
 - a. Psyc 100. Introduction to Psychology
 - b. Psyc 210. Psychological Statistics
or
MSci 210. Applied Business Statistics
 - c. Psyc 311. Introduction to Experimental Psychology

The following courses (or equivalent) are recommended:

- a. Psyc 302. Management and Organizational Behavior
or
Mgmt 302. Management and Organizational Behavior
- b. Psyc 355. Industrial Psychology
or
Mgmt 455. Human Resources Management
- c. Psyc 377. Tests and Measurements

Students who meet the general requirements of the university for admission to graduate study, but who do not meet the Psychology Department's specific requirements for admission to classified status or who wish to take course work prior to winter quarter consideration of their application for classified status, may be admitted to the university in the unclassified postbaccalaureate status. Unclassified post-

baccalaureate students may enroll, when space is available, in selected graduate courses, with the instructor's approval.

Advancement to Candidacy

In order to be advanced to candidacy, a student must have:

1. Achieved classified status;
2. Secured a graduate advisor to supervise the course of study;
3. Completed, with the approval of the student's advisor, at least 16 quarter units of graduate course work at this university, and achieved a minimum grade point average of 3.0 ("B") in those courses;
4. Filed an approved graduate program which must have the approval of the student's advisor, the department chair or chair of the graduate program committee and the Dean of Graduate Studies.

Requirements for Graduation

Clinical/Counseling Option:

1. Completed at least 78-82 quarter units (depending on the culminating option selected in item 2 below) of course work in an approved graduate program with a grade point average of at least 3.0 ("B") and grades of "C" (2.0) or better in all courses in the program;
2. One of the following:
 - A. Completed and defended an original thesis. Students selecting the thesis option take five units of Psychology 611 in preparation for the thesis.

OR

- B. Successful completion of the comprehensive examination. Students selecting the examination option take five units of Psychology 612 in preparation for the examination.
3. Received the approval of the student's graduate committee;
4. Any additional general requirements not cited above and listed on Page 320.

The comprehensive examination is designed to be integrative in nature and is offered during the spring quarter. Students who do not receive a passing grade may elect to:

- A. Repeat the examination, one additional time only

OR

- B. Complete Psychology 699. Thesis.

Complete details regarding the examination option are available from the Psychology Department.

Industrial/Organizational Option

1. Completed a minimum of 82 quarter units of approved graduate level work with at least 60 units completed in residence at this university with a grade point average of at least 3.0 ("B") and grades of "C" (2.0) or better in all courses in the program.
2. Completed and defended an original master's thesis (a two course sequence, Psychology 611 and 699).

Classified graduate students in the Master of Science programs must complete their degree requirements within five years of admission to the program. Students with classified status who fail to register for at least one course in the Psychology M.S. program each quarter will automatically be declassified.

Degree Requirements

Clinical/Counseling

Thesis Option (82 units)

1. Psyc 611. Advanced Independent Study (2 to 5) for a total of (5)
2. Psyc 633. Professional Ethics and Law (4)
3. Psyc 636. Cross-Cultural Counseling (2)
4. Psyc 638. Substance Abuse (2)
5. Psyc 640. Advanced Methods in Psychological Research (4)
6. Psyc 641. Advanced Psychological Statistics (5)
7. Psyc 654. Advanced Life-Span Developmental Psychology (4)
8. Psyc 665. Psychopathology (4)
9. Psyc 666. Family Processes (4)
10. Psyc 671. Counseling Practicum I (5)
11. Psyc 672. Counseling Practicum II (5)
12. Psyc 673. Counseling Practicum III (5)
13. Psyc 679. Theories of Counseling and Psychotherapy (4)
14. Psyc 682. Adult Assessment (4)
15. Psyc 687A. Independent Consultation in Counseling Skills (2)
16. Psyc 687B. Independent Consultation in Counseling Skills (2)
17. Psyc 687C. Independent Consultation in Counseling Skills (2)
18. Psyc 691. Human Sexuality (2)
19. Psyc 697A. Internship in Counseling Psychology (4)
20. Psyc 697B. Internship in Counseling Psychology (4)
21. Psyc 697C. Internship in Counseling Psychology (4)
22. Psyc 699. Thesis (5)

Note: Up to eight units of Psychology 697A, 697B and 697C may be waived for appropriate work experience.

OR

Clinical/Counseling

Comprehensive Examination Option (78 or 79 units)

1. Psyc 612. Directed Readings (2 to 5) for a total of (5)
2. Psyc 633. Professional Ethics and Law (4)
3. Psyc 636. Cross-Cultural Counseling (2)
4. Psyc 638. Substance Abuse (2)
5. A minimum of four units chosen from:
 Psyc 640. Advanced Methods in Psychological Research (4)
 Psyc 641. Advanced Psychological Statistics (5)
6. Psyc 654. Advanced Life-Span Developmental Psychology (4)
7. Psyc 665. Psychopathology (4)
8. Psyc 666. Family Processes (4)
9. Psyc 671. Counseling Practicum I (5)
10. Psyc 672. Counseling Practicum II (5)
11. Psyc 673. Counseling Practicum III (5)
12. Psyc 679. Theories of Counseling and Psychotherapy (4)
13. Psyc 682. Adult Assessment (4)
14. Psyc 687A. Independent Consultation in Counseling Skills (2)

15. Psyc 687B. Independent Consultation in Counseling Skills (2)
16. Psyc 687C. Independent Consultation in Counseling Skills (2)
17. Psyc 691. Human Sexuality (2)
18. Psyc 697A. Internship in Counseling Psychology (4)
19. Psyc 697B. Internship in Counseling Psychology (4)
20. Psyc 697C. Internship in Counseling Psychology (4)
21. Six units of electives to be chosen from 500- or 600-level courses, excluding Psychology 575, 595, 611 and 612.

Note: Up to eight units of Psychology 697A, 697B and 697C may be waived for appropriate work experience.

Industrial/Organizational

Thesis Option (82 units)

1. Psyc 581A. Seminar in Industrial/Organizational Psychology: Current Professional Issues (2)
2. Psyc 581B. Seminar in Industrial/Organizational Psychology: Professional Standards and Practice (2)
3. Psyc 581C. Seminar in Industrial/Organizational Psychology: Problem Definition (2)
4. Psyc 611. Advanced Independent Study (2 to 5) for a total of (5)
5. Psyc 633. Professional Ethics and Law (4)
6. Psyc 638. Substance Abuse (2)
7. Psyc 640. Advanced Methods in Psychological Research (4)
8. Psyc 641. Advanced Psychological Statistics (5)
9. Psyc 642. Applied Problem Analysis (4)
10. Psyc 643. Multivariate Methods (4)
11. Psyc 654. Advanced Life-Span Developmental Psychology (4)
12. Psyc 660. Organizational Development and Training (4)
13. Psyc 661. Performance Assessment (4)
14. Psyc 662. Personnel Selection and Validation (4)
15. Psyc 663. Applied Psychological Measurement (4)
16. Psyc 675. Practicum in Applied Psychology (4)
17. Psyc 689. Externship in Applied Psychology (2 to 5) for a total of (5)
18. Psyc 699. Thesis (5)
19. Eight units chosen from:
 Psyc 650. Advanced Cognitive Psychology (4)
 Psyc 652. Advanced Learning and Motivation (4)
 Psyc 656. Advanced Physiological Psychology (4)
 Psyc 658. Advanced Personality and Social Psychology (4)
20. A minimum of six units chosen from:
 Mgmt 601. Organization Theory and Behavior (4)
 Mgmt 640. Methods of Organizational Change (4)
 Mgmt 641. Personnel Administration (4)
 Mgmt 642. Communication and Interpersonal Processes (4)
 Mgmt 643. Organizational Design (4)
 Mgmt 644. Industrial Relations (4)
 Psyc 583. Theories of Counseling and Psychotherapy (4)

- Psyc 636. Cross-Cultural Counseling (2)
 Psyc 665. Psychopathology (4)
 Psyc 688. Consultation in Organizational Skills (2)

COURSE OFFERINGS IN PSYCHOLOGY (Psyc)

Upper Division

575. Internship in Psychology

Supervised work and study in private or public organizations. May be repeated once for credit. (Only four units of Psychology 575 may be applied to upper-division elective requirements in the psychology major.) Graded credit/no credit. *Prerequisites: consent of instructor and department.* (4 units)

581. Seminar in Industrial/Organizational Psychology

Selected topics in industrial/organizational psychology. M.S. I/O option candidates are required to take all three topics. May not be repeated for credit. *Prerequisites: upper-division or graduate standing and consent of department.*

- A. Current Professional Issues (2 units)
- B. Professional Standards and Practice (2 units)
- C. Problem Definition (2 units)

595. Independent Study

Special topics involving literature and/or experimental effort. A total of eight units of Psychology 595 may be applied toward graduation, of which a maximum of four units can be applied toward the upper-division requirements in the psychology major. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and departmental approval of a written proposal of a project submitted on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 to 4 units)

597. Honors Seminar

Provides an opportunity for students to develop an independent project under faculty supervision. Students will meet as a class to discuss their projects, as well as various advanced topics. Enrollment is limited to students whose formal application for departmental honors is approved. *Prerequisites: Psychology 311 and consent of department.* (4 units)

598. Honors Project

Provides an opportunity for students to conduct an independent project under faculty supervision. Enrollment is limited to students whose formal application for departmental honors is approved. May not be used to satisfy the requirements of the psychology major.

- A. *Prerequisites: Psychology 597 and consent of department.* (2 units)
- B. *Prerequisites: Psychology 598A and consent of department.* (2 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

611. Advanced Independent Study

Advanced research on a specific topic selected by the student with the approval of the student's committee. May be repeated up to two times for a maximum of 15 units credit with approval of the student's committee and the department chair. Only five units are required for the master's degree. *Prerequisites: Psychology 569 or 570; advancement to candidacy and consent of department.* (Credit to be arranged: 2 to 5 units)

612. Directed Readings

Special topics involving supervised readings under the direction of a faculty member. *Prerequisites: graduate standing and consent of department.* (Credit to be arranged: 2 to 5 units)

630. Teaching of Psychology

Instructional methods for teaching of psychology at the college level. *Prerequisites: classified graduate status in psychology and consent of department.* (2 units)

633. Professional Ethics and Law

Ethical and legal considerations involved in counseling practice, including statutory law, legal trends, and ethical behavior in the mental health profession. *Prerequisites: classified standing in Psychology M.S. degree program and consent of department.* (4 units)

636. Cross-Cultural Counseling

Study of how cultural values and ethnic backgrounds influence counseling process and outcome, with focus on counseling with Blacks, Hispanics, Asians, and Native Americans. *Prerequisites: classified standing in Psychology M.S. degree program and consent of department.* (2 units)

638. Substance Abuse

Recognizing major forms of substance abuse, including alcoholism and other chemical dependency with focus on etiological factors and treatment considerations. *Prerequisites: classified standing in Psychology M.S. or M.A. degree programs and consent of department.* (2 units)

640. Advanced Methods in Psychological Research

Those aspects of philosophy of science and methods of inquiry as applied to procedures for obtaining and evaluating data as well as issues in experimental design. Formerly Psychology 569. *Prerequisites: classified standing and consent of department.* (4 units)

641. Advanced Psychological Statistics

Review of concepts of statistical inference. Applications of statistical techniques to the design and interpretation of experimental research. Four hours lecture and three hours laboratory. Formerly Psychology 570. *Prerequisites: classified standing and consent of department.* (5 units)

642. Applied Problem Analysis

Review and use of methodological and statistical strategies in the solution of applied research problems. Statistical computer packages will be used for data analysis. Formerly Psychology 571. *Prerequisites: Psychology 640 (or 569) and 641 (or 570) or equivalents, and consent of department.* (4 units)

643. Multivariate Methods

Multivariate models used in psychological research, including multiple regression, discriminant function analysis, factor analysis, canonical analysis, and multiple analysis of variance. Formerly Psychology 572. *Prerequisites: Psychology 641 (or 570) or equivalent, classified standing and consent of department.* (4 units)

645. Advanced Infancy and Early Childhood Development

Research and theory relating to prenatal development through age five. Classic theory and current literature concerning development in physical, cognitive, language, social and emotional domains will be examined. *Prerequisites: Psychology 654 and classified graduate status.* (4 units)

646. Advanced Middle Childhood and Adolescent Development

Theoretical and empirical contributions to understanding physical, cognitive, and social-emotional development during the school-age period (6-12) and adolescence (13-18). A survey of empirical findings from both basic and applied research will focus on methods, applications, and interventions relevant to these age groups. *Prerequisites: Psychology 654 and classified graduate status.* (4 units)

647. Advanced Adulthood and Aging Development

Key topics in developmental psychology concerning young, middle aged and older adults. Specialized methodological and measurement concerns will be discussed as well as age-related changes and theoretical/empirically based applications. *Prerequisites: Psychology 654 and classified graduate status.* (4 units)

650. Advanced Cognitive Psychology

Research and theories in the psychology of thinking, knowing and remembering. *Prerequisites: classified graduate standing in Psychology M.A. or M.S. degree programs and consent of department.* (4 units)

652. Advanced Learning and Motivation

Major theories and research in learning and motivation with emphasis on current issues. *Prerequisites: classified graduate standing in Psychology M.A. or M.S. degree programs and consent of department.* (4 units)

654. Advanced Life-Span Developmental Psychology

Examination of the developmental processes, theories, issues and research in life-span developmental psychology. *Prerequisites: classified graduate standing in Psychology M.A. or M.S. degree programs and consent of department.* (4 units)

655. Advanced Seminar in Developmental Psychology

Selected current issues and advanced topics of theoretical, research or applied interest in developmental psychology. Formerly Psychology 582 credit may not be received twice for the same topic. *Prerequisites: classified standing and consent of department.* (4 units)

656. Advanced Physiological Psychology

Study of biological bases of behavior with emphasis on recent research. *Prerequisites: classified graduate standing in Psychology M.A. or M.S. degree programs and consent of department.* (4 units)

658. Advanced Personality and Social Psychology

Major theories, methods and empirical findings in personality and social psychology. *Prerequisites: classified graduate standing in Psychology M.A. or M.S. degree programs and consent of department.* (4 units)

660. Organizational Development and Training

Critical review of current theories and methods of organizational change, including training and management development. *Prerequisite: classified graduate standing in M.A. or M.S. degree program or consent of department.* (4 units)

661. Performance Assessment

Current research and methods of performance appraisal and wage and salary administration. Topics will include the study of job analysis, performance appraisal, job evaluation, and assessment of pay equity. *Prerequisite: classified graduate standing in M.A. or M.S. degree program or consent of department.* (4 units)

662. Personnel Selection and Validation

Principles and methods of personnel selection, including validation strategies and the effects of governmental and legal issues on personnel actions. *Prerequisite: classified graduate standing in M.A. or M.S. degree program or consent of department.* (4 units)

663. Applied Psychological Measurement

Theories, methods, and issues of psychological measurement and assessment. Topical coverage will include test construction, test evaluation, survey development, ethics, and testing in applied settings. *Prerequisite: classified graduate standing in M.A. or M.S. program or consent of department.* (4 units)

664. Applied Life-Span Developmental Psychology

Conceptual, methodological and policy related issues in the application of developmental psychology to applied settings. *Prerequisites: classified standing and consent of department.* (4 units)

665. Psychopathology

Major types of human psychopathology, including descriptive symptomatology, etiological factors and treatment considerations. *Prerequisites: classified standing in Psychology M.S. degree program and consent of department; or Psychology 390, classified standing in Psychology M.A. degree program and consent of department; or Psychology 390 and consent of department.* (4 units)

666. Family Processes

Normal and dysfunctional family processes, including analysis of family systems, family communication and strategies for therapeutic intervention. *Prerequisites: classified standing and consent of department.* (4 units)

671. Counseling Practicum I

Training in development of basic counseling skills. Three hours lecture and six hours laboratory. *Prerequisites:* *classified standing in the Psychology M.S. degree program; concurrent enrollment in Psychology 687A and consent of department.* (5 units)

672. Counseling Practicum II

Training in counseling use and application of behavior modification skills. Three hours lecture and six hours laboratory. *Prerequisites:* *grade of no less than "B" in Psychology 671; concurrent enrollment in Psychology 687B and consent of department.* (5 units)

673. Counseling Practicum III

Training in advanced counseling skills. Three hours lecture and six hours laboratory. *Prerequisites:* *grade of no less than "B" in Psychology 672; concurrent enrollment in Psychology 687C and consent of department.* (5 units)

675. Practicum in Applied Psychology

Training in the application of methods and theories of psychology to the solution of practical problems within organizations. The course will include both a classroom component and practical applications. *Prerequisites:* *classified graduate standing in M.A. or M.S. degree program and consent of department.* (4 units)

678. Advanced Topics in Psychology

Selected advanced psychology topics with specific focus within relatively narrow content area. Formerly Psychology 578, credit may not be received twice for the same topic. *Prerequisites:* *classified standing and consent of department.* (2 units)

679. Theories of Counseling and Psychotherapy

Comparative analysis of major theories related to current practice of counseling and psychotherapy. Formerly Psychology 583. *Prerequisites:* *classified standing and consent of department.* (4 units)

680. Advanced Seminar in Psychology

Selected advanced topics which encompass areas of current theoretical and/or research interest in psychology. Formerly Psychology 580 credit may not be received twice for the same topic. *Prerequisites:* *classified standing and consent of department.* (4 units)

682. Adult Assessment

Training in methods of intellectual, vocational and personality assessment with adults. *Prerequisites:* *classified standing and consent of department.* (4 units)

683. Child Assessment

Training in methods of intellectual and personality assessment with children. *Prerequisites:* *classified standing and consent of department.* (4 units)

684. Topics in Counseling Psychology

Selected topics within counseling psychology. May be repeated for credit as topics change. *Prerequisites:* *classified standing and consent of department.* (4 units)

687. Independent Consultation in Counseling Skills

Individual consultation with staff concerning skills development. Graded credit/no credit.

A. *Prerequisite:* *consent of department. Corequisite:* *concurrent enrollment in Psychology 671.* (2 units)

B. *Prerequisite:* *consent of department. Corequisite:* *concurrent enrollment in Psychology 672.* (2 units)

C. *Prerequisite:* *consent of department. Corequisite:* *concurrent enrollment in Psychology 673.* (2 units)

689. Externship in Applied Psychology

Supervised field work in a public or private setting for additional training and extension of skills developed in the graduate program. The externship requires approval by a faculty supervisor. Graded credit/no credit. *Prerequisites:* *Psychology 569 and consent of department.* (Credit to be arranged; 2 to 5 units)

691. Human Sexuality

Study of human sexuality with emphasis on both healthy sexuality and sexual dysfunction. Formerly Psychology 591. *Prerequisites:* *classified standing and consent of department.* (2 units)

697. Internship in Counseling Psychology

Supervised counseling field work in private or public mental health agencies. Designed to be taken three times (year long) for maximum of 12 units of credit. Graded credit/no credit. *Prerequisites:* *classified standing in the Psychology M.S. degree program, Psychology 671, 672, 687A, 687B, 687C; a grade of "A" or "B" in Psychology 673; and consent of department.*

A. (4 units)

B. (4 units)

C. (4 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the master's degree. Students enrolled in this course have full use of university facilities. *Prerequisites:* *advancement to candidacy and consent of department.* (0 units)

699. Thesis

Prerequisites: *Psychology 569 and/or 570; Psychology 611; advancement to candidacy and consent of department.* (5 units)

PUBLIC ADMINISTRATION

Master of Public Administration

Accredited by the National Association of Public Affairs and Administration

School of Business and Public Administration

Jack Brown Hall, Room 456
880-5758

FACULTY: David Bellis, Chuck Christie, Michael Clarke, Guenther Kress, J. Brian Watts, Clifford Young (Chair)

MASTER OF PUBLIC ADMINISTRATION

Requirements (48 units)

The Master of Public Administration (M.P.A.) is a broad program designed to prepare students for a career in administration in the public sector. The major objective is to provide the student with a generalist perspective of public administration, including tools of decision-making, an understanding of the total public administrative system, and a capacity for working within the public environment.

This degree is intended for graduate students and career employees seeking to develop and strengthen academic and professional skills for admission and advancement in the professional practice of public administration.

The program is open to all students, regardless of undergraduate major.

Admission to the M.P.A. Program

Although applications for admission to the university as a postbaccalaureate student are accepted at any time, the following schedule of dates has been established for actions by the School of Business and Public Administration in determining eligibility for classified graduate standing.

Entry Quarter	Application Received by	Documents Received by
Winter, 1996	Oct. 1, 1995	Oct. 31, 1995
Spring, 1996	Jan. 1, 1996	Jan. 31, 1996
Fall, 1996	July 1, 1996	July 31, 1996
Winter, 1997	Nov. 1, 1996	Nov. 30, 1996

Note: The GRE should normally be taken 8-10 weeks prior to the application deadline to insure that the scores will be reported before the application deadline.

Applicants who apply after the deadline for a particular term and have all documents which show they meet all requirements for classified graduate standing may be admitted to conditionally classified standing. They will be converted to classified graduate standing during the next regular academic term. Students in this category should contact the director of graduate studies of the School of Business and Public Administration for further information.

Students who meet all entrance requirements except course prerequisites may be admitted to the program in a conditionally classified status until those prerequisite deficiencies are removed, at which time they will be advanced to classified graduate standing in the program.

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A bachelor's degree from an accredited college or university;
2. The following combination of grade point average (grade point average) and test score on the GRE (Graduate Record Examination, Verbal and Quantitative Sections): GRE score plus 400 times grade point average on the last 90 sequential quarter units (60 semester units) of course work (including postbaccalaureate course work) equals or exceeds 2100;
3. Submission of GRE score by the deadline for that term; if test result is not submitted on time, admission status will be unclassified postbaccalaureate;
4. Competence in the following prerequisite courses or their equivalents:

A. Mgmt 495.	Expository Writing for Administration (with a grade of "B" or better)
B. MSci 210.	Applied Business Statistics
or	
Math 305.	Statistics: Hypothesis Testing and Estimation
C. PA 575.	Internship in Public Administration (May be waived dependent upon related work experience.)

Competence in the above prerequisite courses may be demonstrated by:

- A. Formal completion of the course or its equivalent.
 - B. Credit by examination.
 - C. Waiver based on specialized work experience; must have documentation of work directly related to course to be waived; and must be approved by the department's M.P.A. Graduate Director (Students requesting waiver of any prerequisite courses must petition the M.P.A. Graduate Director. Inquiries about a challenge examination or substitution for Management 495 should be directed to the Dean of Graduate Studies.)
5. Academic motivation and personal qualifications demonstrated through submission of a 200-250 word statement of reasons for wishing to pursue the M.P.A. at California State University, San Bernardino, and personal qualifications that will contribute to successful completion of the program. No more than twelve (12) units of graduate credit earned in unclassified/conditionally classified standing may be counted toward meeting the requirements for the degree.

Advancement to Candidacy

To be advanced to candidacy, a student must have:

1. Achieved classified standing;
2. Completed at least 20 quarter units of applicable graduate-level course work at the university, with a minimum grade point average of 3.0 ("B");

3. Completed an approved graduate program plan in consultation with an M.P.A. advisor after achieving classified status;
4. Secured the approval of candidacy from the M.P.A. Graduate Director and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 48 quarter units of acceptable graduate-level work, consistent with the program plan (with a grade point average of 3.0), with at least 36 units completed at this university;
2. At least 28 quarter units of credit taken after advancement to candidacy for the degree;
3. Successful completion of the required core and elective courses as outlined in the curriculum section;
4. A grade point average of 3.0 ("B") in all course work taken after admission to conditionally classified or classified status, and grades of "C" (2.0) or better in all courses in the program;
5. Successful completion of the graduate research project. The graduate research project is defined as an advanced field study in public administration including both literary and empirical research. This requirement is met by the student's enrollment in Public Administration 695 during the last quarter of work in the program and completion of the project to the satisfaction of the student's advisor.

OR

Successful completion of an integrative comprehensive examination which may be taken any fall, winter or spring term after advancement to candidacy. Students with grade point average below 3.0 ("B") will not be permitted to take the examination. A "no credit" (NC) designation will be entered on the student's transcript if he/she fails the examination. Students who do not receive a passing grade may elect to:

- A. Repeat the examination, one additional time only, with the written approval of the Department's M.P.A. Graduate Director ;

Note: With the written approval of the Department's M.P.A. Graduate Director, students who do not receive a passing grade after repeating the examination may complete Public Administration 695. Graduate Research Project.

OR

- B. Complete Public Administration 695. Graduate Research Project.

The examination will be offered fall, winter and spring quarters. *Only students who are currently classified, have been advanced to candidacy and are not on probation may take the examination.*

6. Any additional general requirements not cited above and listed on Page 320.

Degree Requirements (48 units)

Comprehensive Examination Option

1. *Four units chosen from:*
 - Mgmt 603. Research Methods in Administration (4)
 - PA 603. Research Methods in Administration (4)
2. PA 611. Public Administration Theory and Practice (4)
3. PA 615. Public Financial Management (4)
4. PA 662. Human Resource Management in the Public Sector (4)
5. PA 663. Public Budgeting and Finance (4)
6. PA 664. Management of Public Organizations (4)
7. PA 672. Administrative Regulation (4)
8. PA 680. Public Policy Analysis (4)
9. *Sixteen units of electives* to be chosen from any Department of Public Administration 500- or 600-level courses in consultation with an advisor or from related fields with advance approval from the chair of the Department of Public Administration. No more than twelve units may be taken from 500-level courses.
10. Successful completion of the comprehensive examination.

Graduate Research Project Option

1. *Four units chosen from:*
 - Mgmt 603. Research Methods in Administration (4)
 - PA 603. Research Methods in Administration (4)
2. PA 611. Public Administration Theory and Practice (4)
3. PA 615. Public Financial Management (4)
4. PA 662. Human Resource Management in the Public Sector (4)
5. PA 663. Public Budgeting and Finance (4)
6. PA 664. Management of Public Organizations (4)
7. PA 672. Administrative Regulation (4)
8. PA 680. Public Policy Analysis (4)
9. PA 695. Graduate Research Project (4)
10. *Twelve units of electives* to be chosen from any Department of Public Administration 500- or 600-level courses in consultation with an advisor.

Students may take up to two courses at the 500- or 600-level from related fields with the permission of the School of Business and Public Administration graduate committee. Students who wish to take up to two 300- or 400-level courses must petition the school's director of graduate studies for approval in advance; for each course approved, they will be required to enroll simultaneously in a two-unit independent study course directly related to the course selected. These independent study units cannot be applied to any graduate degree unit requirements.

Only conditionally classified and classified students (or those who have the consent of the school director of graduate studies) may enroll in 600-level courses.

Students may not include more than 12 quarter units in transfer credit from other colleges. California State University, San Bernardino will not consider for transfer credit course work from any institution which will not accept that work in its own advanced degree program.

COURSE OFFERINGS IN PUBLIC ADMINISTRATION (PA)

Upper Division

514. Management of Private Nonprofit Organizations

Analyzes the specific problems of management in private nonprofit organizations, including planning, personnel, financial and policy issues. (4 units)

516. Public and Non-Profit Project Management

Aspects of project management, including needs and feasibility assessment, project design, proposal writing, contract negotiation, funding, developing project teams, managing team conflict, monitoring, and evaluation. (4 units)

521. Principles of Planning

Introduction to local and regional community planning; includes methods of adoption and interorganizational relationships. (4 units)

548. Management of Computers in the Public Sector

Designed to help students gain competency in computer related skills. Each topic may be taken once for credit. Three hours lecture and two hours activity laboratory.

- A. Word Processing (4 units)
- B. Data Base Management (4 units)
- C. Spread Sheet (4 units)
- D. Communication (4 units)
- E. Networking (4 units)
- F. Special Problems (4 units)

557. Public Sector Labor Relations

Analyzes issues created by collective bargaining and unionism in public sectors. Examples: selection of bargaining agents, bargaining scope and obligation, impasse resolution and grievance procedure. (4 units)

564. Local Public Administration

Administrative characteristics and problems of public management in the urban area, including city, county, school and special district organization and functions. (4 units)

568. Accounting for Government and Not-for-Profit Organizations

Covers principles and practices of government fund accounting. Topics include governmental accounting concepts, types and structure of funds and accounts, application of generally accepted accounting principles to government and not-for-profit entities, presentation and uses of financial statements. (Also offered as Accounting 568. Students may not receive credit for both). *Prerequisite: Accounting 211 or 311.* (4 units)

575. Internship in Public Administration

Supervised work and study in private or public organizations. May be repeated once for credit. Graded credit/no credit. *Prerequisites: consent of instructor and school.* (4 units)

590. Seminar in Public Administration

An intensive study of some phase of public administration to be developed by the instructor. May be repeated for credit as topics change. (4 units)

595. Independent Study

Special topics involving library and/or field research. A total of 10 units in any School of Administration 595 may be applied toward graduation. *Prerequisites: a minimum overall grade point average of 3.0, consent of instructor and approval by the department of a written project/proposal submitted to the appropriate department in the School of Business and Public Administration on a standard application filed in advance of the quarter in which the course is to be taken.* (Credit to be arranged: 2 or 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

603. Research Methods in Administration

Principles of research design, development of research instruments, data accumulation and analysis of significant data integrated with use of computers in research. Critique of sample research studies from the literature and a research study conducted by the student. (Also offered as Management 603. Students may not receive credit for both.) *Prerequisite: Management Science 210.* (4 units)

611. Public Administration Theory and Practice

A critical analysis of major theories of public administration and their application, including development of the discipline, evolution of institutional forms both in the United States and in international settings, concepts of decision-making and role of public administration in society. (4 units)

612. Productivity Measurement in the Public Sector

Analysis of effective and efficient mobilization of agency resources. Includes examination of the environment, techniques, variables and perspectives in applying productivity measurements, particularly at the local level. (4 units)

615. Public Financial Management

Management of financial resources in public organizations with emphasis on local government. Topics include evaluation and monitoring of financial condition and trends, fiscal policy analysis, revenue and expenditure forecasting, capital planning and financing, cash flow management, debt administration, cost allocation and integrated financial management systems. (4 units)

616. Comparative Public Administration

Cross-national comparison of administrative systems, structures, processes and practices of developed and third world countries. (4 units)

617. Management of Local Economic Development

An introduction to the forms, processes and effects of economic development. Topics include: the dynamics of urban change and revitalization; the planning and financing of community economic development programs and projects; the role of public, neighborhood, advocacy and not-for-profit organizations, and social and environmental impacts of economic change. (4 units)

618. Local Government Development Finance

Explains and analyzes the major financing mechanisms for local government economic and public works development, their working and effectiveness. Topics include the background of the budget process and pertinent documents, an overview of economic development and public works finance, assessment districts, fiscal impact analysis, capital budgeting and financing, revenue forecasting, financing of redevelopment agencies, financial indicators, and case studies of development financing. (4 units)

628. Intergovernmental Administration

Administration of governmental programs in an intergovernmental context. Development of the federal system, relationships among federal, state and local governments, intergovernmental fiscal arrangements, practical problems in setting and implementing policies in an intergovernmental context. (4 units)

630. Program Evaluation

Purposes and methods of program evaluation in public and nonprofit organizations. Topics include selection of programs for evaluation, delineation of frame of reference, gathering of information, techniques of reporting, data analysis, comparative approaches of evaluation and ethical issues. *Prerequisite: Management Science 210 or Mathematics 305.* (4 units)

662. Human Resource Management in the Public Sector

Analysis of the personnel function as it applies to public sector organizations. Topics include development of modern public service, functions of personnel management, politics of the civil service, employment discrimination, labor management relations, professionalism and ethics, comparative public personnel administration, and computerization of human resources management. (Equivalent to Social Work 626. Students may not receive credit for both.) (4 units)

663. Public Budgeting and Finance

Budget concepts and their application in varied settings including federal, state, and local governments in the United States and overseas. Includes economic, management and political approaches to budgetary decision-making processes, and institutions, as well as major issues in contemporary budgeting. (4 units)

664. Management of Public Organizations

Issues in public management, including the role of the public executive, theories of public organizations, human behavior in public organizations, management of innovation and policy change, and information management. (4 units)

670. Emergency Management

Covers basic theory and practice in emergency management. Topics include approaches to emergency management, the political and administrative environment, administration of complex systems, behavioral aspects, and establishing and implementing community wide policies. (4 units)

671. Defense Budgeting and Management

Resource allocation and management in defense agencies. Topics include the defense planning and budgeting process; analytical tools for costing defense programs; administration of procurement; contingency and force planning; modernization, readiness and sustainability; and options in the allocation of defense resources. (4 units)

672. Administrative Regulation

Discretionary authority of regulatory agencies, the manner in which power is exercised by such agencies, and the administrative structure of the regulatory process. (4 units)

680. Public Policy Analysis

An integrative course examining the analytical, behavioral and systems sciences approaches to public administrative systems with emphasis upon the development of evaluative skills in applied decision-making. (This course is equivalent to Social Work 629. Students may not receive credit for both). *Prerequisites: Public Administration 611, 662, and 663.* (4 units)

690. Advanced Topics in Public Administration

Intensive study of an advanced topic in public administration. May be repeated for credit as topics change. (4 units)

695. Graduate Research Project

Required field study in public administration, including both literary and empirical research. *Prerequisites: completion of, or concurrent enrollment in, all other courses for the Master of Public Administration; and consent of instructor and school.* (4 units)

REHABILITATION COUNSELING

Master of Arts in Rehabilitation Counseling

Accredited by the Council on Rehabilitation Education

Department of Advanced Studies in Education

Faculty Office Building, Room 126
880-5606

FACULTY: Margaret Cooney (Coordinator), Joseph Turpin

MASTER OF ARTS IN REHABILITATION COUNSELING

Requirements (72 units)

The Master of Arts in Rehabilitation Counseling offered by the School of Education is designed to prepare students to work with individuals with disabilities in public and private rehabilitation agencies, hospitals, industry and related fields. The graduate program, a two-year course of study, will train students in rehabilitation counseling, vocational evaluation and job placement of persons with disabilities. Graduates of the program will be prepared to take the certified rehabilitation counselor examination.

Rehabilitation counseling is a growing field in the mental health and allied health professions. A rehabilitation counselor helps persons with disabilities achieve their optimal social, psychological and vocational potential. Whenever possible, the final goal of rehabilitation is job placement. The rehabilitation counselor works with people who have different disabilities. The handicaps may be physical, intellectual, emotional or sociocultural.

Students will be encouraged to develop areas of specialization by completing research of individual interest and field work experiences in specialization areas. The rehabilitation counseling program also will offer a bilingual rehabilitation counseling experience. The purpose for having a bilingual experience is that there is a demand in the rehabilitation profession for counselors to have the skills to speak and work with Hispanic clients. The mission of the bilingual rehabilitation counseling experience will be to educate students to be rehabilitation counselors who will be able to speak conversational Spanish with Hispanic clients, have an understanding of Hispanic culture and be aware of the special needs of Hispanic persons with disabilities.

Admission to the Program

In addition to the general requirements of the university, specific requirements for admission to classified graduate status are:

1. A baccalaureate degree with a major preferably in education psychology, sociology, or a related social service field;

2. A cumulative undergraduate grade point average of 3.0 ("B") overall;
3. Completion of the graduate writing requirement;
4. A cumulative grade point average of 3.0 ("B") in all previous graduate work;
5. Completion of an interview with two faculty members to assess competence in interpersonal skills and aptitudes for the rehabilitation counseling profession;
6. Participation in a continual evaluation process which will assess personality and character, professional ethics and aptitude, counseling skills, oral and written language usage and many-sided interests.

Advancement to Candidacy

In order to be formally advanced to candidacy, a student must have:

1. Achieved classified graduate standing;
2. Satisfactorily completed Rehabilitation Counseling 615 with a grade of "B" (3.0) or better;
3. Completed with a grade point average of 3.0 ("B") no more than 24 quarter units of course work;
4. Secured approval of candidacy from the School of Education;
5. Filed an approved graduate program for completion of the degree. This must be prepared in consultation with an advisor in the School of Education and approved by the School and the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 72 quarter units of acceptable work, with 59 completed in residence at this university;
2. A minimum of 48 quarter units of credit taken after a student has been advanced to candidacy for the degree;
3. A grade point average of 3.0 ("B") in course work taken to satisfy the Master of Arts degree requirements and grades of "C" (2.0) or better in all courses in the program;
4. Successful completion of one of the following:
 - A. Education 600. Master's Degree Project;
 - B. Written comprehensive examination.
5. Any additional general requirements not cited above and listed on Page 320.

Students who elect to complete a project will register for Education 600; these units will be part of the required 72 units.

A satisfactory project is one which can be reported in the form of a paper and/or through other media. The project proposal and the project must be approved by the student's advisor and one other professor in the School of Education and submitted in an approved format. Further information is available from the School of Education regarding an approved format for the project proposal and project. Students who elect to complete a project are not required to take a comprehensive examination.

Students are encouraged to present projects in a variety of media. The purpose of the project is for the student to communicate ideas gained in research, experimentation and creative endeavors; therefore, students should not feel bound to the traditional forms. All projects will be planned in consultation with the student's advisor.

The comprehensive examination is of an integrative nature and is designed to test the student's knowledge of the field of rehabilitation counseling rather than the subject matter of courses taken. The examination is offered once each quarter during the academic year. Students must enroll in the examination either through the regular registration process or through the Office of Extended Education in the Open University program. The student may enroll in the examination no earlier than the last quarter in which course work is taken. The student must complete a graduation check with the Office of Admissions and Records before permission to take the examination can be granted. Students who do not receive a passing score the second time must petition the Dean of Graduate Studies to take it again. Approval to retake the examination may be, at any time, contingent upon completion of additional designated courses.

Degree Requirements (72 units)

1. Educational counseling courses (24 units):
 - EClg 652. Dynamics of Human Behavior (4)
 - EClg 655. Multicultural Counseling (4)
 - EClg 656. Counseling Theories and Techniques (4)
 - EClg 657A. Counseling Practicum (4)
 - EClg 678. Theory and Practice of Group Counseling (4)
 - Educ 610. Research Methodology in Education (4)
2. Rehabilitation counseling courses (44 units):
 - EReh 605. Seminar Topics in Rehabilitation Counseling (Topic examples: Casework Management, Research in Rehabilitation, Current Issues in Rehabilitation and Bilingual Issues.) (2) for a total of (4)
 - EReh 615. Introduction to Rehabilitation Counseling (4)
 - EReh 616A. Multiple Aspects of Disability: Medical (4)
 - EReh 616B. Multiple Aspects of Disability: Vocational (4)
 - EReh 617. Vocational Assessment and Development (4)
 - EReh 618. Applied Job Placement (4)
 - EReh 649. Organizational Development of Rehabilitation Services (4)
 - EReh 667. Practicum in Rehabilitation Counseling (4)
 - EReh 679. Fieldwork in Rehabilitation Counseling (4) for a total of (12)
3. One of the following options (4 units):
 - A. Master's Degree Project Option
 1. Educ 600. Master's Degree Project (4)
 - OR**
 - B. Written Comprehensive Examination Option
 1. Successful completion of the written comprehensive examination.
 2. Four units chosen from:
 - EClg 531. Introduction to Counseling (4)
 - EClg 650. Applied Career Counseling (4)
 - EClg 693. Special Topics in School Psychology (4)
 - ESpe 530. Psychology and Education of Exceptional Individuals (4)

- ETec 546. Computer Based Technology in Education (4)
- EVoc 504. Principles of Adult Education (4)
- EVoc 637. Foundations of Vocational Education (4)

CERTIFICATE PROGRAM

Certificates may be earned by regularly matriculated or extended education students and denote successful completion of a prescribed program of study designed to (a) impart specified professional/vocational/career competencies; or (b) produce mastery of the content of a sub-field of an academic major (discipline); or (c) provide exposure to the range of materials in a traditional or emerging interdisciplinary field. Certain certificate programs contain 600-level courses as requirements and/or electives. These 600-level courses may not be taken by undergraduate students. Refer to Page 66 for additional certificate information.

Certificate in Rehabilitation Counseling

Certificate Requirements (28 units)

- EClg 531. Introduction to Counseling (4)
- EReh 615. Introduction to Rehabilitation Counseling (4)
- EReh 616A. Multiple Aspects of Disability: Medical (4)
- EReh 616B. Multiple Aspects of Disability: Vocational (4)
- EReh 617. Vocational Assessment and Development (4)
- EReh 618. Applied Job Placement (4)
- EReh 649. Organizational Development of Rehabilitation Services (4)

Note: Rehabilitation Counseling 615 must be completed with a grade of "B" (3.0) or better to continue work in the certificate program.

COURSE OFFERINGS IN REHABILITATION COUNSELING (EReh)

Upper Division

542. Seminar in Rehabilitation Counseling

Intensive study of topics and problems in education. May be repeated for credit as subject matter changes and with consent of instructor. *Prerequisite:* graduate standing or consent of instructor. (Credit to be arranged: 1 to 4 units)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

605. Seminar Topics in Rehabilitation Counseling

Current issues in rehabilitation counseling. Seminar topics include research in rehabilitation, casework management, bilingual issues in rehabilitation and current issues in rehabilitation counseling. May be repeated for credit as topics change. (2 units)

615. Introduction to Rehabilitation Counseling

Fundamental processes and practices of rehabilitation counseling including examination and analysis of the historical, philosophical, organizational, economic and legal basis of rehabilitation. Orientation and field visits to community rehabilitation counseling agencies required. *Prerequisite: Educational Counseling 531 or consent of instructor.* (4 units)

616. Multiple Aspects of Disability

Orientation to community resources providing services to disabled persons. Multiple aspects of disabilities. Implications of disabilities for vocational adjustments and rehabilitation processes.

A. Medical. *Prerequisite: Rehabilitation Counseling 615.* (4 units)

B. Vocational. *Prerequisite: Rehabilitation Counseling 616A or consent of instructor.* (4 units)

617. Vocational Assessment and Development

Survey of methods of vocational assessment of disabled persons. Vocational development theories, occupational and career information systems and psychology of work. *Prerequisites: Rehabilitation Counseling 615, 616A and 616B or consent of instructor.* (4 units)

618. Applied Job Placement

Survey of methods and techniques of job placement with different client populations in rehabilitation settings. Job analysis, job seeking training skills, placement and follow-up for rehabilitation clients. *Prerequisites: Rehabilitation Counseling 615, 616A, 616B and 617 or consent of instructor.* (4 units)

649. Organizational Development of Rehabilitation Services

Various types of training, administration, developmental and job placement programs used in industry, public and private rehabilitation agencies and insurance companies. *Prerequisites: Rehabilitation Counseling 615, 616A, 616B, 617 and 618 or consent of instructor.* (4 units)

667. Practicum in Rehabilitation Counseling

Supervised practice in individual rehabilitation counseling in a laboratory setting. *Prerequisites: Educational Counseling 657A and 677 or consent of instructor.* (4 units)

679. Fieldwork in Rehabilitation Counseling

Field experience in Rehabilitation Counseling. Students will take fieldwork in segments of 4 units for a total of 12 units. Students will be allowed to take up to two segments in one quarter. *Prerequisite: consent of program coordinator.* (4 units)

SCIENCE

Master of Arts in Teaching

Science

School of Natural Sciences

Biological Sciences Building, Room 130
880-5300

COORDINATOR: James M. Mehegan

MASTER OF ARTS IN TEACHING SCIENCE

Requirements (48 Units)

The Master of Arts in Teaching with a major in Science is a multi-track program for the professional science teacher designed to strengthen and broaden the student's background in science and in science education. The tracks relate to teaching in the elementary, middle or high school environment. Each one stresses a "hands-on" approach to teaching science, and provides a breadth of science coursework appropriate to that range of grade levels.

Admission to the M.A.T. Program

In addition to the general requirements of the university, requirements for admission to classified graduate status are:

1. A baccalaureate degree from an accredited college or university;
2. A grade point average of 3.0 ("B") or better in undergraduate biology, chemistry, geoscience, physics and mathematics courses;
3. Completion of the graduate writing requirement;
4. Three letters of recommendation. These should attest to the student's academic ability and aptitude for the teaching profession;
5. A letter of not more than three pages outlining background, interests, and career goals;
6. The requirements in their respective track below:
 - A. Elementary Track
 1. A valid multiple subject teaching credential or equivalent professional experience;
 2. 15 units of science to include the following coursework:
 - a. biology with laboratory
 - b. physics or chemistry with laboratory
 - c. geoscience with laboratory
 3. Precalculus mathematics.
 - B. Middle School Track
 1. A valid multiple or single subject teaching credential or equivalent professional experience;
 2. A total of at least 30 units in general chemistry, college physics, geological sciences and general biology;
 3. A 4-quarter unit course with laboratory in each of biology, chemistry, geoscience and physics;
 4. Precalculus mathematics;

5. An introductory college-level course in computers or computer science.

C. High School Track

1. A valid multiple or single subject teaching credential or equivalent professional experience;
2. 20 upper-division units applicable to a major in a biology, chemistry, geoscience, physics or an integrated science degree based on the above subjects;
3. A minimum of four quarter units of calculus.

Advancement to Candidacy

In order to be advanced to candidacy, the student must have:

1. Achieved classified status;
2. Submitted a formal program of graduate work prepared in consultation with and approved by their advisory graduate committee;
3. Completed at least 12 and not more than 20 quarter units of applicable work as a graduate student at this university with the approval of the advisory committee and with a minimum of grade point average of 3.0 ("B") or better;
4. Gained final approval of the program and of the candidacy itself by the Dean of Graduate Studies.

Requirements for Graduation

1. Advancement to candidacy for the degree.
2. A minimum of 48 quarter units of acceptable graduate level work as specified below in the formal program under one of the tracks. No less than 32 units must be completed in residence at this university.
3. Completion of the 18-unit core of courses in science and science teaching. The remaining 30 units must be chosen in accordance with the Elementary Track, the General Science Track, the Life Science Track or the Physical Science Track.
4. A grade point average of at least 3.0 ("B") in all required course work and at least a "C" (2.0) grade in all courses in the program.
5. Any additional requirements not cited above and listed on Page 320.

Degree Requirements (48 units)

Core Courses (18 units)

1. Educ 623. The Science Curriculum (2)
2. Educ 634. Current Research in Science Education (4)
3. Educ 645. Issues in Science, Technology and Society in the Classroom (2)
4. NSci 604. Nature and History of Science (4)
5. NSci 645. Issues in Science, Technology and Society (2)
6. *Four units chosen from:*
 - Educ 600. Master's Degree Project (4)
 - NSci 694. Master's Project (4)
7. *Thirty units in one of the following tracks:*

Elementary Track (30 units)

- Biol 301. Biology in the Classroom (4)
- Chem 304. Chemistry in the Classroom (2)
- Chem 305. Demonstration Laboratory in Chemistry (1)

- EEIB 647. Topics in Teaching Elementary Science (4)
 Geol 304. Geology in the Classroom (2)
 Geol 305. Demonstration Laboratory in Geology (1)
 Geol 306. Oceanography for the Science Teacher (3)
 HSci 352. Environmental Health I (4)
 NSci 612. Developing Elementary Science
 Laboratories (3)
 Phys 303. Astronomy for Educators (3)
 Phys 304. Physics in the Classroom (2)
 Phys 305. Demonstration Laboratory in Physics (1)
Note: After consultation with the program coordinator,
 an upper-division or graduate course in the same
 scientific discipline may be substituted for
 Biology 301, Chemistry 304, Geology 304 or
 306, Physics 303 and 304.

Middle School Track (30 units)

- ESec 648. Topics in Teaching Middle School
 Science (4)
 Math 306. Mathematics, the Language of
 Science (4)
 NSci 633. Developing Chemistry Laboratories (1)
 NSci 634. Developing Geoscience Laboratories (1)
 NSci 635. Developing Life Science Laboratories (1)
 NSci 636. Developing Physics Laboratories (1)
 18 approved upper-division or graduate quarter units in
 biology, chemistry, geological sciences or physics with
 no more than eight units from any one discipline. *These
 units may not include Biology 301, Chemistry 304, 305,
 306, Physics 303, 304 or 305. Note:* after consultation
 with an advisor, a higher numbered mathematics course
 may be substituted for Mathematics 306.

High School Track (30 units)

- ESec 649. Topics in Teaching Sciences at the High
 School Level (4)
 Math 307. Mathematics in Science (4)
 NSci 633. Developing Chemistry Laboratories (1)
 NSci 634. Developing Geosciences Laboratories (1)
 NSci 635. Developing Life Science Laboratories (1)
 NSci 636. Developing Physics Laboratories (1)
 18 units of approved coursework in biology, chemistry,
 geological sciences or physics at the upper-division or
 graduate level. *These units may not include Biology 303.*

SOCIAL SCIENCES

Master of Arts in Social Sciences

School of Social and Behavioral Sciences

Faculty Office Building, Room 146
880-5479

COORDINATOR: John Heeren

MASTER OF ARTS IN SOCIAL SCIENCES

Requirements (45 units)

The objective of the M.A. in Social Sciences is to provide a student with training in the method and theory of social science, as well as the basic perspectives of the disciplines within it. While the program provides course work in the breadth of the social sciences, its emphasis is on history, political science, economics, and geography, making the program attractive to those pursuing a career in or seeking advancement in secondary school teaching in the social sciences.

Admission to the M.A. Program

In addition to the general requirements of the university, specific requirements for admission to classified status are:

1. A baccalaureate degree in a social science discipline or in social science itself, or another baccalaureate degree with course work that satisfies the School of Social and Behavioral Sciences that the student has received adequate preparation to undertake the program;
2. A cumulative undergraduate grade point average of at least 2.5 overall and at least 3.0 ("B") in the major;
3. Completion of the graduate writing requirement;
4. A brief statement describing the applicant's preparation for graduate study and academic and professional goals, to be submitted to the School of Social and Behavioral Sciences; and
5. Three letters of recommendation, with at least two from former professors. Letters should come directly from the recommenders or be included in a placement file. It is the applicant's responsibility to determine if letters have been received.

Applicants who meet the general requirements of the university for admission to graduate study but do not meet the additional requirements listed above may be admitted to the university in the unclassified postbaccalaureate status. unclassified postbaccalaureate students may enroll, when space permits, in graduate courses in the program. An unclassified postbaccalaureate student should consult with the School of Social and Behavioral Sciences to determine what steps would be necessary to advance to classified status.

Advancement to Candidacy

In order to be formally advanced to candidacy, a student must have:

1. Achieved classified status;
2. Secured a graduate advisor to supervise the course of study;
3. Completed, with the approval of the advisor, at least 12 quarter units of graduate course work at this university and achieved a minimum grade point average of 3.0 ("B") in those courses;
4. Filed an approved program which must have the approval of the student's advisor, the coordinator of the program, and the Dean of Graduate Studies.

Requirements for Graduation

1. Completed a minimum of 45 quarter units of acceptable graduate-level work, with at least 32 quarter units completed in residence at this university;
2. A grade point average of at least 3.0 ("B") in all courses taken as part of the program;
3. Successful completion of the comprehensive examination or a thesis;
4. At least 23 units of 600-level courses;
5. Any additional requirements not cited above and listed on Page 320.

Comprehensive examination: Students who choose the comprehensive examination option must take that examination no earlier than in the last quarter of program course work. These students must enroll in Social Sciences 999, Comprehensive Examination. Students with less than a 3.0 grade point average in the program will not be permitted to take the examination. The comprehensive examination committee for each candidate will consist of the student's advisor and two other faculty teaching in the program, as mutually agreed between the candidate and the faculty. The comprehensive examination will cover the areas of social science treated in the course requirements. The examination will be graded pass/fail, and candidates failing the examination may take it a second time within one year. If a second examination is needed, the student and advisor should discuss what actions may be necessary to remedy the student's shortcomings. No student will be permitted to take the comprehensive examination more than twice.

Thesis: A student selecting the thesis option must complete a thesis that is approved by his or her thesis committee. The thesis must reflect original work and show a level of competence appropriate for a master's degree. The thesis committee shall consist of three faculty members, including the student's advisor, mutually agreed upon by the student and faculty. By mutual agreement between the student and advisor, an additional member may be added to the committee. The student should enroll in Social Sciences 699, Thesis, in the quarter when completion of the thesis is anticipated.

Degree Requirements (45 units)

Core Courses (21 units)

1. Econ 600. Proseminar in Economics (4)
2. Geog 600. Proseminar in Geography (4)
3. Hist 600. Proseminar in History (4)
4. PSci 610. Proseminar in Political Science (4)
5. SSci 600. Social and Cultural Perspectives in the
Social Sciences (5)

Electives (24 units)

Each student must select 3 concentration areas from within the 4 "major fields:" Economics, Geography, History and Political Science. For each concentration area, the student must take two courses as electives.

The following courses will be acceptable as electives:

- A. All courses numbered 500-699 in Economics, Geography, History and Political Science. At least one course must be at the 600-level.
- B. Other upper division courses in those departments as approved by the program coordinator.

COURSE OFFERINGS IN SOCIAL SCIENCES (SSci)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Social and Cultural Perspectives in the Social Sciences

The relationship of values, behavior, social setting, and environment in the analysis of human interaction. Both intracultural and cross-cultural perspectives will be addressed in light of sociological and anthropological theories. Substantive and methodological contributions will be presented. Laboratory will provide students with hands-on research skills component. Four hours lecture and two hours laboratory. *Prerequisite: consent of instructor.* (5 units)

695. Directed Graduate Studies

Graduate-level independent study for students in Interdisciplinary Master of Arts programs; to be conducted under direct supervision of a faculty member from the student's committee and, if an interdisciplinary studies major, with approval of the committee on graduate education and consent of the Dean of Graduate Studies. (Credit to be arranged: 1 to 6 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the M.A. degree. Students enrolled in this course have full use of university facilities. To retain classified standing in the master's program, a student must enroll in this course each quarter until the project or thesis is accepted or the comprehensive examination passed. *Prerequisites: advancement to candidacy, approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies.* (0 unit)

699. Thesis

Independent graduate research resulting in thesis and successful defense. *Prerequisites: advancement to candidacy and consent of program director.* (4 units)

SOCIAL WORK

Master of Social Work

Accredited by the Council on Social Work Education

Department of Social Work

*Temporary Office Building, Room 143
880-5501*

FACULTY: Lucy Cardona, Morley Glicken, Marjorie Hunt, Marshall Jung, Nancy Mary, Rosemary McCaslin (Chair), Teresa Morris, Stephen Petty

MASTER OF SOCIAL WORK

Requirements (90 units)

The Department of Social Work offers courses leading to the MSW degree and is designed to provide for the education of advanced social work practitioners. The program is based upon the requirements of the Council on Social Work Education and its six subject areas.

The MSW program is structured into two models: Model (1) offers 6 quarters of course work leading to the MSW degree within two academic years. Model (2) offers course work geared to students who need a longer period of time to complete course requirements. The program is committed to helping part-time students develop an educational plan which will meet employment and personal needs, to the extent possible.

The program offers students the choice of selecting one of two specializations within the concentration of Advanced Clinical Social Work Practice.

The two specializations are:

1. **Mental Health**—Prepares students to work in settings which serve the chronically mentally ill and those with problems of an emotional nature which interfere with social functioning.
2. **Children, Youth and their Families**—Prepares students to work in settings which respond to such varied problems as child abuse and neglect, aging and physical disabilities.

Admission to the Program

1. A baccalaureate degree from an accredited college or university;
2. A 2.75 or better grade point average in the last sixty semester units or 90 quarter units taken. Good standing in the last college attended;
3. An academic background in the liberal arts;
4. Completion of the graduate writing requirement;
5. A year of full-time paid experience, one year internship in a social agency, or relevant volunteer service (this requirement may be waived);
6. Evidence of personal qualifications, motivation and potential that give promise of a successful social worker; an autobiographical statement; three letters of reference from individuals who are familiar with the student's academic work potential and level of maturity;

6. The following courses or their equivalents:

- A. Soc 307. Social Research I
- B. Soc 339. Socialization
- C. A course in Biology or Health Science which would give the student an understanding of basic human physiology.

Course Waivers

Students are permitted to test out of required courses in the foundation year curriculum in HBSE, POLICY and RESEARCH by passing a comprehensive examination in each required course at the level of a grade of "A." Courses which are successfully challenged must be substituted with an approved elective so that a total of 90 units is completed for the master's degree.

Advanced Standing

Students with BSW degrees from universities or colleges with accredited BSW programs may have the following courses waived if they have achieved grades of "A" in their comparable undergraduate courses:

- SW 604A. Human Behavior and Social Environment
- SW 606A. Social Welfare Policy
- SW 612. Social Research Applications I

Each course waived for the qualified BSW applicant must be substituted with an approved elective so that a total of 90 units is completed for the master's degree.

Advancement to Candidacy

To be advanced to candidacy, a student must have:

1. Achieved classified status;
2. Satisfied the general university requirements for advancement to candidacy;
3. Selected a thesis committee and gained approval of the thesis topic by the thesis committee if a thesis is chosen;
4. Completed with a grade point average of 3.0 ("B"), at least 48 quarter units of course work.

Requirements for Graduation

1. A minimum of 90 quarter units of designated graduate courses as approved on the petition for advancement to candidacy. Seventy-seven of the quarter units must be completed at this university (with the exception of MSW course work from an accredited program);
2. A grade point average of at least 3.0 ("B") in all course work;
3. Completion of a culminating research project or a thesis;
4. Up to one half of the course work (45 quarter units) may be transferred from an accredited MSW program. Only grades of "B" or better will be accepted and students must first be accepted for admission following the usual admission procedures. Courses not in keeping with program requirements may not be acceptable;
5. Any additional requirements not cited above and listed on Page 320.

Electives

In lieu of taking all eight units of electives in the social work curriculum, students may elect to take four units of relevant 600-level electives from other disciplines with the permission of the director of social work. The remaining four units would be taken from the social work curriculum.

Accreditation

The program was granted full accreditation by the Commission on Accreditation of the Council on Social Work Education in February, 1992. Questions regarding accreditation should be directed to the chair of the Department of Social Work.

Residency

The student must carry an academic workload of a minimum of eight units of 600-level course work for three consecutive quarters to achieve the residency requirement of full-time graduate status as defined by the university.

Degree Requirements

The program is structured into two Models:

Model 1 (Full-time students) for full-time students, will offer six quarters of course work leading to the MSW degree in two years. Courses are normally taken in the following sequence:

Foundation Year (48 units)

1. Fall:

- SW 602A. Social Work Practice with Individuals, Families and Small Groups: Introduction (4)
- SW 604A. Human Behavior and the Social Environment: Introduction (4)
- SW 606A. Social Welfare Policy: Introduction (4)
- SW 608A. Field Work (4)

2. Winter:

- SW 600. Social Work with Task Groups, Organizations and Communities (4)
- SW 604B. Human Behavior and the Social Environment: Advanced (4)
- SW 606B. Social Welfare Policy: Advanced (4)
- SW 608B. Field Work (4)

3. Spring:

- SW 602B. Social Work Practice with Individuals, Families and Small Groups: Intermediate (4)
- SW 608C. Field Work (4)
- SW 612. Social Research Applications I (4)

A four unit 600-level elective in Social Work or another department on campus with advisor consent. Review of field, classroom, and writing competency performance and other relevant information by the faculty before the student may be advanced to candidacy.

Specialization Year (42 units)

1. Fall:

- SW 640. Advanced Clinical Social Work Practice (4)
- SW 608D. Field Work (4)
- SW 613. Social Research Applications II (4)
- SW 622. Crisis Intervention and Emergency Treatment (4) or an approved elective.

2. Winter:

- Mental Health Specialization:*
- SW 608E. Field Work (4)
- SW 619. Seminar in Practice in Mental Health (4)

- SW 620. Social Work with Alcohol and Drug Abuse (4)

- SW 625A. Research Project (2)

Children, Youth and their Families Specialization:

- SW 608E. Field Work (4)

- SW 614. Child Abuse and Neglect (4)

- SW 618. Seminar in Practice with Children, Youth and their Families (4)

- SW 625A. Research Project (2)

3. Spring:

Mental Health Specialization:

- SW 608F. Field Work (4)

- SW 616. Human Sexuality in Social Work Practice (4) or an approved elective

- SW 624. Integrative Seminar in Mental Health (2)

- SW 625B. Research Project (2)

Children, Youth and their Families Specialization:

- SW 608F. Field Work (4)

- SW 616. Human Sexuality in Social Work Practice (4) or an approved elective

- SW 623. Integrative Seminar in Children, Youth and Families (2)

- SW 625B. Research Project (2)

Note: The research project represents the culminating graduate experience. A thesis may still be done as an expansion of the research project but is optional and the four elective units Spring Quarter of the advanced year might be used for this purpose. The research project is developed in SW 613 (Social Research Applications II) and is carried out in the field setting. It must be on a specialization-specific topic, must use objective analysis and will be presented to faculty and field personnel orally and in writing, but on a reduced scale than would be expected in a thesis.

Model 2 (for part-time students) offers course work leading to the MSW degree in three or four years.

Option 1 (3 years) (Option 1 utilizes summer course work. Summer course tuition rates are higher than those for the regular year. This option is entirely voluntary.)

The requirements are normally taken in the following sequential order:

Foundation Year (24 units)

1. Fall:

- SW 604A. Human Behavior and the Social Environment: Introduction (4)

- SW 606A. Social Welfare Policy: Introduction (4)

2. Winter:

- SW 604B. Human Behavior and the Social Environment: Advanced (4)

- SW 606B. Social Welfare Policy: Advanced (4)

3. Spring:

- SW 600. Social Work with Task Groups, Organizations and Communities (4)

- SW 602A. Social Work Practice with Individuals, Families and Small Groups: Introduction (4)

4. Summer Session 1:

SW 622. Crisis Intervention and Emergency Treatment (4) or an approved elective

5. Summer Session 3:

SW 616. Human Sexuality in Social Work Practice (4) or an approved elective

Second Year (24 units)

1. Fall:

SW 602B. Social Work Practice with Individuals, Families and Small Groups: Intermediate (4)

SW 608A. Field Work (4)

2. Winter:

SW 608B. Field Work (4)

SW 612. Social Research Applications I (4)

3. Spring:

SW 608C. Field Work (4)

SW 613. Social Research Applications II (4)

Review of field, classroom, and writing competency performance and other relevant information by the faculty before the student may be advanced to candidacy.

4. Summer Session

A four unit 600-level elective in social work or another department on campus with advisor consent.

Mental Health Specialization:

SW 620. Social Work with Alcohol and Drug Abuse (4)

Children, Youth and their Families Specialization:

SW 614. Child Abuse and Neglect (4)

Third Year (42 units)

1. Fall:

SW 608D. Field Work (4)

SW 640. Advanced Clinical Social Work Practice (4)

2. Winter:

Mental Health Specialization:

SW 608E. Field Work (4)

SW 619. Seminar in Practice in Mental Health (4)

SW 625A. Research Project (2)

Children, Youth and their Families Specialization:

SW 608E. Field Work (4)

SW 618. Seminar in Practice with Children, Youth and their Families (4)

SW 625A. Research Project (2)

3. Spring:

Mental Health Specialization:

SW 608F. Field Work (4)

SW 624. Integrative Seminar in Mental Health (2)

SW 625B. Research Project (2)

Children, Youth and their Families Specialization:

SW 608F. Field Work (4)

SW 623. Integrative Seminar in Children, Youth and Families (2)

SW 625B. Research Project (2)

Option 2 (4 years)

The requirements are normally taken in the following sequential order:

Foundation Year (24 units)

1. Fall:

SW 604A. Human Behavior and the Social Environment: Introduction (4)

SW 606A. Social Welfare Policy: Introduction (4)

2. Winter:

SW 604B. Human Behavior and the Social Environment: Advanced (4)

SW 606B. Social Welfare Policy: Advanced (4)

3. Spring:

SW 600. Social Work with Task Groups, Organizations and Communities (4)

SW 602A. Social Work Practice with Individuals, Families and Small Groups: Introduction (4)

Second Year (24 units)

1. Fall:

SW 602B. Social Work Practice with Individuals, Families and Small Groups: Intermediate (4)

SW 608A. Field Work (4)

2. Winter:

SW 608B. Field Work (4)

SW 612. Social Research Applications I (4)

3. Spring:

SW 610. Integrative Seminar I (4)

SW 608C. Field Work (4)

Third Year (16 units)

1. Fall:

SW 622. Crisis Intervention and Emergency Treatment (4) or an approved elective

2. Winter:

SW 616. Human Sexuality in Social Work Practice (4) or an approved elective

3. Spring:

Mental Health Specialization:

SW 613. Social Research Applications II (4)

SW 620. Social Work with Alcohol and Drug Abuse (4)

Children, Youth and their Families Specialization:

SW 613. Social Research Applications II (4)

SW 614. Child Abuse and Neglect (4)

Fourth Year (26 units)

1. Fall:

SW 602C. Social Work Practice with Individuals, Families and Small Groups: Advanced (4)

SW 608D. Field Work (4)

2. Winter:

Mental Health Specialization:

SW 608E. Field Work (4)

SW 619. Seminar in Practice in Mental Health (4)

SW 625A. Research Project (2)

Children, Youth and their Families Specialization:

- SW 608E. Field Work (4)
 SW 618. Seminar in Practice with Children, Youth and their Families (4)
 SW 625A. Research Project (2)

3. Spring:

Mental Health Specialization:

- SW 608F. Field Work (4)
 SW 624. Integrative Seminar in Mental Health (2)
 SW 625B. Research Project (2)

Children, Youth and their Families Specialization:

- SW 608F. Field Work (4)
 SW 623. Integrative Seminar in Children, Youth and Families (2)
 SW 625B. Research Project (2)

Note: Accreditation requirements and university curriculum evaluations may require curricular changes. Students must consult the Department of Social Work for any changes in policies, procedures and program description.

COURSE OFFERINGS IN SOCIAL WORK (SW)

Graduate/Postbaccalaureate

May not be taken by undergraduate students

600. Social Work with Task Groups, Organizations and Communities

An examination of the impact of organizations and task groups on service delivery systems. Emphasis on networking and advocacy strategies. *Prerequisites: classified graduate standing and consent of department.* (4 units)

602. Social Work Practice with Individuals, Families and Small Groups

Analysis of theories, practice, principles and techniques relating to the treatment of individuals, families and small groups. *Prerequisites: classified graduate standing and consent of department.*

- A. Introduction (4 units)
 B. Intermediate (4 units)

604. Human Behavior and Social Environment

Critical appraisal and review of individual development from infancy through old age, from biological, sociological, cultural and psychological perspectives. *Prerequisites: classified graduate standing and consent of department.*

- A. Introduction (4 units)
 B. Advanced (4 units)

606. Social Welfare Policy

An analysis and study of social welfare from a historical perspective, making note of the ideologies that have affected our contemporary social welfare policy. *Prerequisites: classified graduate standing and consent of department.*

- A. Introduction (4 units)
 B. Advanced (4 units)

608. Field Work

Advanced practice experience in public and private agencies with individuals, families, groups, formal organizations and communities. Graded credit/no credit. *Prerequisites: classified graduate standing and consent of department.*

- A. (4 units)
 B. (4 units)
 C. (4 units)
 D. (4 units)
 E. (4 units)

612. Social Research Applications I

Theory, practice and methods of data collection and analysis. An examination of the role of research in the development of social work. *Prerequisites: classified graduate standing and consent of department.* (4 units)

613. Social Research Applications II

Further examination of the role of research in the development of social work theory, practice and methods of data collection and analysis. *Prerequisites: Social Work 612 and consent of department.* (4 units)

614. Child Abuse and Neglect

Critical analysis of child maltreatment and neglect, focusing upon recent research and treatment innovations. *Prerequisites: classified graduate standing and consent of department.* (4 units)

616. Human Sexuality in Social Work Practice

Critical analysis of issues and problems associated with human sexuality with an emphasis on sexually oppressed groups and the sexual life cycle from a psychosocial perspective. *Prerequisites: classified graduate standing and consent of department.* (4 units)

618. Seminar in Practice with Children, Youth and their Families

Specialized practice issues related to the evaluation and treatment of client dysfunctions in settings which serve children, youth and families. *Prerequisites: Social Work (602C) or 640 and consent of department.* (4 units)

619. Seminar in Practice in Mental Health

Specialized practice issues related to the evaluation and treatment of client dysfunctions in settings that serve the chronically mentally ill as well as those experiencing emotional distress. *Prerequisites: Social Work 640 (or 602C) and consent of department.* (4 units)

620. Social Work with Alcohol and Drug Abuse

An examination of theories, research and treatment regarding alcohol and drug abuse. *Prerequisites: classified graduate standing and consent of department.* (4 units)

622. Crisis Intervention and Emergency Treatment

An examination of crisis theory. Principles and practice of crisis intervention treatment. *Prerequisites: classified graduate standing and consent of department.* (4 units)

623. Integrative Seminar in Child, Youth and Families

Integration of practice theory, research, HBSE and social policy to develop responses to problems of clients serviced by agencies who respond to the needs of children, youth and families including child abuse, physical disability, problems of the elderly and financial difficulties. *Prerequisites: Social Work 618 and consent of department.* (4 units)

624. Integrative Seminar in Mental Health

Integration of practice theory, research, HBSE and social policy in developing responses to problems of clients in agencies who respond to chronic mental illness and emotional dysfunction. *Prerequisites: Social Work 619 and consent of department.* (4 units)

625. Research Project

A culminating graduate experience in which a clinical issue specific to the student's field setting and specialization is objectively evaluated and presented orally and in writing. *Prerequisites: Social Work 619 and consent of department.*

A. (2 units)

B. (2 units)

626. Personnel Management

Prepares the student for work related to management and supervision of agency personnel. Focuses on development of job descriptions, training, employee assignment and evaluation, sexual harassment and employee development. Equivalent to Public Administration 662. Students may not receive credit for both. *Prerequisites: classified graduate standing and consent of department.* (4 units)

627. Psychopathology

An advanced human behavior course giving the student an understanding of dysfunctional behavior and the application of DSM III to the diagnostic function. *Prerequisites: Social Work 604A, 604B and consent of department.* (4 units)

628. Community Organization

Prepares the social work student for work in communities to identify community problems, to stimulate development of appropriate organizations and to bring about social change. *Prerequisites: classified graduate standing and consent of department.* (4 units)

629. Advanced Social Welfare Policy Analysis

Examines in an analytical, behavioral and systems sciences approach social welfare policy with an emphasis on the development of evaluative skills in applied decision making. This course is equivalent to Public Administration 680. Public Policy Analysis. Students may not receive credit for both. *Prerequisites: Social Work 606A, 606B and consent of department.* (4 units)

630. Social Work Intervention with Families

Study of social work practice situations in which the family is the primary unit of treatment. Includes the work of Satir, Ritchie and Bowen among others. *Prerequisite: consent of department.* (4 units)

631. Social Work Intervention with Children

Preparation for social work practice with children who have serious social, emotional and physical difficulties. The course prepares students for work in social work settings such as family service and community mental health settings where dysfunctional children are often seen. *Prerequisite: consent of department.* (4 units)

632. Forensic Social Work

Focus on evidential and procedural rules in court testimony which relate to social work practice. Emphasis on court testimony involving child abuse and neglect, sexual violence, and institutionalization of the mentally ill. *Prerequisite: consent of department.* (4 units)

633. Social Work Intervention with the Elderly

Intervention with the elderly. Case management functions of social work practice with the elderly as well as clinical interventions in problems often troubling the elderly. *Prerequisite: consent of department.* (4 units)

635. Supervision in Social Work

Review of major supervisory functions in social work agencies with special attention to clinical supervision of practice, supervising compliance with agency policies and supervision of agency workload expectations. *Prerequisite: consent of department.* (4 units)

640. Advanced Clinical Social Work Practice

Advanced practice course for students in the clinical concentration. Considers practice issues, theories and techniques utilized in the Mental Health and Children, Youth and Families specializations. Formerly Social Work 602C. *Prerequisite: consent of department.* (4 units)

690. Special Topics in Social Work

An intensive study of some aspect of social work. May be repeated for credit as topics change. *Prerequisite: consent of department.* (4 units)

698. Extended Enrollment

Independent study leading to completion of requirements (other than course work) for the master's degree. Students enrolled in the course have full use of university facilities. *Prerequisites: advancement to candidacy and consent of department.* (0 unit)

699. Thesis Research

Preparation of a thesis for the Master of Social Work degree program under the direction of a student's thesis committee. *Prerequisites: classified graduate standing and consent of department.* (4 units)

URBAN PLANNING

Master of Urban Planning

Department of Geography

Faculty Office Building, Room 249
880-5519

FACULTY: James Mulvihill (Director)

MASTER OF URBAN PLANNING Requirements (72 units)

The Master of Urban Planning (MUP) is an interdisciplinary graduate degree for practicing planners and individuals that have some experience with the field of planning who wish to acquire an effective understanding of the role of urban planning and policy-making in everyday life. It brings together an understanding of city structure and process, design, analysis, and communication skills within a framework organized around the knowledge requirements for making effective collective decisions.

Admission to the Program

1. A baccalaureate degree from an accredited college or university;
2. A 2.75 or higher grade point average in the last 60 semester units or 90 quarter units taken and good standing in the last college attended. Because of the competitive nature of admissions, applicants with less than a 3.0 ("B") grade point average are advised to take the GRE (Taking the GRE is encouraged because it also makes the candidate eligible for several student assistance programs.);
3. Some form of experience in urban planning representing at least six months of full-time work, that may include: paid employment, internship or volunteer work;
4. Evidence of academic motivation and personal qualifications demonstrated through submission of a two or three page statement of purpose for wishing to pursue the Master of Urban Planning at California State University, San Bernardino. It should include a concise description of past and present education and employment experiences, how these experiences relate and have led to the choice of urban planning as a career objective, and a statement describing a specific occupational focus in planning;
5. Completion of the graduate writing requirement. This requirement can be satisfied through one of three means:
 - a. Completion, with a grade of "B" or better, of one of the following courses: Education 495, Humanities 495, Management 495, Natural Sciences 495, or Social Sciences 495, or,
 - b. Completion, with a grade of "B" or better, of an equivalent advanced expository writing course at another college or university, or,
 - c. Satisfactory completion of a designated examination at this university;

6. Applicant must possess fundamental knowledge of urban studies and city planning. Such competence can be demonstrated by:
 - a. Completion of Geography 415 and 440, or their equivalent, or,
 - b. Credit by examination, or,
 - c. Specialized work experience accompanied by documentation approved by the MUP director.

Advancement to Candidacy

To be advanced to candidacy, a student must have:

1. Achieved classified status;
2. Completed at least 24 quarter units of applicable graduate-level course work at this university, with a minimum grade point average of 3.0 ("B");
3. Completed an approved graduate program plan in consultation with the student's program advisor after achieving classified status;
4. Secured the approval of candidacy from the Dean of Graduate Studies.

Requirements for Graduation

1. A minimum of 72 quarter units of acceptable graduate-level work, consistent with the program plan (with a grade point average of 3.0), with at least 48 units completed at this university. At least 50 percent of the program must be taken in residence;
2. At least 48 quarter units of credit must be taken after advancement to candidacy for the degree;
3. Successful completion of the required core and elective courses outlined in the curriculum section;
4. A grade point average of 3.0 ("B") in all course work taken after admission to classified status, and grades of "C" (2.0) or better in all courses in the program;
5. Successful completion of the graduate research project. The graduate research project is defined as an advanced field study in urban planning including both literary and empirical research. This requirement is met by enrollment in Geography 697, and, subsequently, Geography 699. The project must be completed to the satisfaction of the student's program advisor, and the MUP director.

Degree Requirements (72 units)

Core Courses (58 units)

1. Comm 611. Briefing and Presentations (4)
2. Geog 605. Spatial Data Presentation (4)
3. Geog 615. Foundations of Planning I (4)
4. Geog 616. Foundations of Planning II (4)
5. Geog 617. Planning Within the Local Power Structure (4)
6. Geog 650. Environmental Issues of Land Management (4)
7. Geog 680. Advanced Demographic Analysis (4)
8. Geog 695. Planning Colloquium (2)

Six units chosen from:

- A. Strategic Planning and Project Management
- B. Negotiation in Planning
- C. Subdivision Review and Site Design
- D. Urban Design and Open Space

- E. Neighborhood Planning
- F. Urban Housing and Community Development
- G. Urban Planning Law
- H. Urban Transportation Planning
- I. Regional Issues of Urban Planning
- 9. Geog 697. Project Proposal Development (4)
- 10. Geog 698. Research Project in Urban Planning (4)
for a total of (8)
- 11. PA 617. Management of Local Economic
Development (4)
- 12. PA 618. Local Government Development
Finance (4)
- 13. PA 680. Public Policy Analysis (4)

Electives (14 units):

To be chosen in consultation with program advisor, 14 units from the following: (Other electives may be substituted with prior approval of the student's program advisor and the MUP director.)

- Econ 475. Public Finance (4)
- Geog 305. Geographic Research Methods (4)
- Geog 460. Biogeography (4)
- Geog 470. Hydrology and Water Resources (4)
- Geog 575. Internship in Geography (5) with a
maximum of (10)
- Geog 695. Planning Colloquium (2) with a maximum
of (8)
- HSci 357. Hazardous Material Control (2)
- HSci 401. Land Use: Health Aspects (4)
- Math 305. Statistics: Hypothesis Testing and
Estimation (4)
- PSci 428. Formulation of Public Policy (4)
- PA 521. Principles of Planning (4)
- PA 564. Local Public Administration (4)
- PA 603. Research Methods in Administration (4)
- PA 628. Intergovernmental Administration (4)
- PA 630. Program Evaluation (4)
- PA 672. Administrative Regulation (4)
- Soc 434. Community Organization (4)

Course Waivers:

Students with an exceptional amount of prior professional or educational experience are encouraged to test-out of appropriate coursework within the MUP program. Approval for such waiver of program requirements, or of course substitutions, must be obtained from the student's program advisor and the MUP director. Geography 615 may not be waived.

Faculty 1995-1996



Dr. Mary Smith
Professor of Marketing
 California State University, San Bernardino
Outstanding Professor, 1995-96

Susan L. Addington, 1988

Associate Professor of Mathematics

B.S. 1976, Marlboro College; M.A. 1978, Ph.D. 1981, State University of New York at Stony Brook.

William Aguilar, 1989

Librarian; Vice President for Information Resources and Technology

B.A. 1970, Adams State College; M.S. 1974, University of Wisconsin-Madison; Ph.D. 1983, University of Illinois, Urbana.

Gene L. Andrusco, 1977

Associate Professor of Accounting and Finance

B.S. 1972, M.B.A. 1975, California State University, Los Angeles; Ph.D. 1984, Claremont Graduate School.

Brian Arnold, 1993

Lecturer in Education

B.A. 1988, M.A. 1992, Azusa Pacific University.

Richard Ashcroft, 1989

Associate Professor of Education

B.S., Ed. 1966, East Stroudsburg State University; M.A. Ed 1981, Sonoma State University; Ed.D. 1990, University of San Francisco.

Parviz Asheghian, 1991

Professor of Economics

B.A. 1971, Iranian Institute of Advanced Accounting; M.B.A. 1973, University of Detroit; M.A. 1976, University of Florida; Ph.D. 1980, Georgia State University.

Melissa C. Axelrod, 1994

Assistant Professor of English

B.A. 1974, State University of New York, Stony Brook; M.A. 1978, Ph.D. 1991, University of Colorado.

Rise B. Axelrod, 1986

Professor of English

B.A. 1968, M.A. 1971, Ph.D. 1977, University of California, Los Angeles.

Maria V. Balderrama, 1994

Assistant Professor of Education

B.A. 1978, Wellesley College; M.A. 1988, San Jose State University; M.A., Ed.S, Ph.D. 1994, Stanford University.

Robin B. Balthrope, 1993

Assistant Professor of History

B.A. 1979, Harvard University; M.A. 1988, John Carroll University; J.D. 1982, University of Virginia.

Russell J. Barber, 1984

Professor of Anthropology; Chair, Department of Anthropology

B.A. 1972, University of Vermont; A.M. 1974, Ph.D. 1979, Harvard University.

Elizabeth J. Barfield, 1994

Professor of Nursing; Chair, Department of Nursing

B.S.N. 1970, M.S.N. 1972, Duke University; Ed.D. 1979, College of William and Mary.

Elliott R. Barkan, 1968

Professor of History

B.A. 1962, Queens College; M.A. 1963, Ph.D. 1968, Harvard University.

Ronald E. Barnes, Jr., 1965

Professor of Theatre Arts

B.S.Ed. 1951, University of Minnesota; Ph.D. 1963, Stanford University.

- Buckley B. Barrett, 1982
Librarian; Head, Automation Services
B.A. 1970, University of California, Los Angeles; M.S. 1973, University of Southern California.
- Gabriel R. Bassiry, 1987
Professor of Management
B.S. 1970, Accounting Advanced Institute, Tehran; M.B.A. 1974, University of Scranton; M.A., 1976, Ph.D. 1977, State University of New York, Binghamton.
- Francisca Beer, 1990
Professor of Accounting and Finance
B.A. 1982, M.A. 1983, University of Catholique de Mons; Ph.D. 1990, Catholic University of Louvain.
- David J. Bellis, 1985
Professor of Public Administration
B.A. 1966, University of California, Los Angeles; M.A. 1969, Ph.D. 1977, University of Southern California.
- Frank D. Benson, 1986
Professor of Accounting and Finance
B.S. 1955, University of Southern California; M.B.A. 1960, University of California, Los Angeles; M.A. 1979, Ph.D. 1984, Claremont Graduate School.
- Jacques Benzakein, 1985
Associate Professor of French; Chair, Department of Foreign Languages
B.A. 1964, Andrews University; M.A. 1966, University of Wisconsin; Ph.D. 1986, University of California, Riverside.
- Frances F. Berdan, 1973
Professor of Anthropology
B.A. 1965, M.A. 1967, Michigan State University; Ph.D. 1975, University of Texas.
- Anand R. Bhatia, 1972
Assistant Professor of Information and Decision Sciences
B.Sc. 1957, M.E. 1961, Bombay University; B.S.E.E. 1964, Western States College of Engineering; M.B.A. 1966, D.B.A. 1975, University of Southern California.
- Cynthia J. Bird, 1989
Professor of Accounting and Finance
B.A. 1973, College of William and Mary; Ph.D. 1989, University of Georgia.
- Robert A. Blackey, 1968
Professor of History
B.A. 1963, City College of New York; M.A. 1964, Ph.D. 1968, New York University.
- Billie G. Blair, 1988
Professor of Education; Chair, Department of Elementary and Bilingual Education
B.S. 1966, Texas Technological University; M.S. 1971, M.A. 1980, San Diego State University; Ph.D. 1983, Claremont Graduate School.
- Mary Ellen Bobp, 1991
Senior Assistant Librarian
B.A. 1975, California State University, Long Beach; M.L.S. 1977, University of Southern California.
- Sheldon E. Bockman, 1973
Professor of Management
B.A. 1958, M.A. 1960, University of Colorado; Ph.D. 1968, Indiana University.
- Sarah Boeh, 1989
Assistant Professor of Physical Education
B.S. 1977, Illinois State University; M.A. 1985, Ohio State University.
- Michael L. Boorom, 1992
Associate Professor of Marketing
B.A. 1969, M.A. 1971, M.B.A. 1981, Ph.D. 1994, University of South Florida.
- Edward J. Bostley, 1988
Professor of Music
B.M. 1962, M.M. 1970, Eastman School of Music; D.M.A. 1980, University of Missouri, Kansas City.
- Richard J. Botting, 1982
Professor of Computer Science
B.Tech. 1967, Ph.D. 1972, Brunel University, England.
- Nicole Bournias-Vardiabasis, 1987
Professor of Biology
B.S. 1975, University of California, Irvine; Ph.D. 1978, University of Essex, United Kingdom.
- David Bourquin, 1982
Librarian
A.B. 1963, Wheaton College; M.Div. 1966, United Theological Seminary; M.Th. 1967, Princeton Theological Seminary; M.S. in L.S. 1971, University of Southern California.
- Stephen A. Bowles, 1974
Professor of Education
B.A. 1960, University of Denver; M.A. 1964, University of Connecticut; Ph.D. 1972, University of California, Santa Barbara.
- Klaus R. Brasch, 1990
Professor of Biology; Acting Dean, School of Natural Sciences
B.S. 1965, Concordia University; M.S. 1968, Ph.D. 1971, Carleton University.
- Susan J. Brotherton, 1990
Assistant Professor of Education
B.S. 1975, California State Polytechnic University; M.A. 1989, California State University, San Bernardino.
- James Brown, 1989
Associate Professor of English
B.A. 1980, San Francisco State University; M.F.A. 1986, University of California, Irvine.
- Bonnie J. Brunkhorst, 1987
Professor of Education and Geological Sciences
B.A. 1961, M.A. 1961, Boston University; Ph.D. 1987, University of Iowa.
- Herbert K. Brunkhorst, 1988
Professor of Education and Biology
B.A. 1966, Coe College; M.A.T. 1968, Ph.D. 1979, University of Iowa.
- Michael R. Burgess, 1970
Librarian; Head, Technical Services
A.B. 1969, Gonzaga University; M.S. in L.S. 1970, University of Southern California.
- Ruth E. Burke, 1989
Associate Professor of Foreign Languages
B.A. 1972, Loma Linda University; M.A. 1975, Ph.D. 1984, University of California, Riverside.

- B. Jill Buroker, 1981**
Professor of Philosophy
 B.A. 1967, DePauw University; M.A. 1968, Ph.D. 1974, University of Chicago.
- Katharine M. Busch, 1984**
Associate Professor of Education
 B.S. 1971, Indiana University, Kokomo; M.S. 1973, Ed.S. 1979, Ed.D. 1986, Indiana University, Bloomington.
- Renate M. Caine, 1978**
Professor of Education
 B.A. 1965, University of Nevada; M.Ed. 1975, Ph.D. 1978, University of Florida.
- William E. Camp, 1990**
Professor of Education; Chair, Department of Advanced Studies in Education
 B.S. 1972, M.Ed. 1978, Texas Tech University; Ed.D. 1983, Virginia Tech.
- Lucy F. Cardona, 1993**
Assistant Professor of Social Work
 B.A. 1969, Western New Mexico University; M.S.W. 1980, University of California, Los Angeles.
- John S. Chaney, 1972**
Professor of Management
 B.S. 1966, University of Southwestern Louisiana; M.B.A. 1968, Ph.D. 1971, University of Texas.
- Otto H. Chang, 1991**
Professor of Accounting and Finance
 B.S. 1973, National Taiwan University; M.A.S. 1980, Ph.D. 1984, University of Illinois.
- Ralph James Charkins, 1976**
Professor of Economics
 B.A. 1966, University of Santa Clara; Ph.D. 1970, University of North Carolina.
- David V. Chavez, 1988**
Assistant Professor of Psychology
 A.B. 1982, Harvard; M.A. 1986, Ph.D. 1993, University of California, Berkeley.
- Joseph D. Chavez, 1987**
Associate Professor of Mathematics
 B.S. 1982, University of San Francisco; M.S. 1985, Ph.D. 1987, University of California, Riverside.
- Dorothy C. Chen 1992**
Assistant Professor of Health Science and Human Ecology
 B.S. 1978, University of Southern California; M.S. 1981, California State University, Los Angeles; Ph.D. 1994, University of California, Davis.
- Rong Chen, 1992**
Assistant Professor of English
 B.A. 1979, Xian Foreign Language Institute; M.A. 1986, Ph.D. 1990, Ball State University, Muncie, Indiana.
- Yu-Chin Chien, 1989**
Associate Professor of Psychology
 B.S. 1975, Chengchi University (Taiwan Intl.); M.S. 1979, Ph.D. 1983, Cornell University.
- C. Charles Christie, Jr., 1972**
Professor of Public Administration
 B.A. 1967, M.P.A. 1969, California State College, Hayward; Ph.D. 1974, University of Southern California.
- Kim R. Clark, 1993**
Lecturer in Health Science and Human Ecology
 B.A. 1971, California State University, Humboldt; M.P.H. 1979, Loma Linda University; Dr. P.H. 1991, University of California, Berkeley.
- Mark T. Clark, 1990**
Associate Professor of Political Science
 B.A. 1984, California State Polytechnic University; M.A. 1986, Ph.D. 1989, University of Southern California.
- J. Milton Clark, 1983**
Associate Professor of English
 B.A. 1972, California State College, San Bernardino; M.A. 1977, Ph.D. 1988, University of California, Riverside.
- K. Michael Clarke, 1976**
Professor of Public Administration
 B.A. 1969, M.A. 1970, University College Dublin; Ph.D. 1975, University of Georgia.
- Frances S. Coles, 1978**
Professor of Criminal Justice
 LL.B. 1969, Edinburgh University; M.Crim. 1970, D.Crim. 1975, University of California, Berkeley.
- Arturo I. Concepcion, 1990**
Professor of Computer Science
 B.S. 1969, University of Santo Tomas, Manila; M.S. 1981, Washington State University; Ph.D. 1984, Wayne State University, Detroit.
- Leo P. Connolly, 1988**
Professor of Physics; Chair, Department of Physics
 B.A. 1969, University of California, Berkeley; Ph.D. 1975, University of Arizona.
- Margaret H. Cooney, 1983**
Professor of Education
 B.A. 1967, St. Mary's College; M.A. 1969, University of Illinois; Ph.D. 1981, University of Iowa.
- Susan M. Cooper, 1988**
Associate Professor of Education; Director, Academic Computing and Media
 B.S. 1973, Drake University; M.A. 1980, Ph.D. 1986, Northern Illinois University.
- Janet Corley, 1993**
Lecturer in Nursing
 B.S. 1970, Columbia Union College; M.S. 1975, Loma Linda University.
- Rafael E. Correa, 1985**
Professor of Spanish
 B.A. 1973, M.A. 1976, Ph.D. 1984, Rutgers University.
- Patricia Tefft Cousin, 1987**
Associate Professor of Education
 B.S. 1973, University of Wisconsin; M.A. 1976, Ed.S. 1980, Tennessee State University; Ph.D. 1987, Indiana University, Bloomington.

Kimberley R. Cousins, 1991

Assistant Professor of Chemistry
B.S. 1984, Duke University; Ph.D. 1991, University of Texas, Austin.

Gloria A. Cowan, 1973

Professor of Psychology
B.A. 1959, University of Pennsylvania; M.S. 1961, Ph.D. 1964, Rutgers University.

John H. Craig, 1971

Professor of Chemistry; Chair, Department of Chemistry
B.S. 1964, George Washington University; Ph.D. 1969, Georgetown University.

Robert E. Cramer, 1978

Professor of Psychology
B.A. 1973, M.A. 1975, Trinity University; Ph.D. 1978, University of Oklahoma.

Sandra K. Cross, 1986

Associate Professor of Health Science and Human Ecology
B.S. 1968, Livingston University; M.E. 1974, University of North Carolina; Ed.D. 1982, University of Virginia.

Samuel M. Crowell, 1987

Associate Professor of Education
B.A. 1971, Carson-Newman College; M.S. 1975, Radford University; Ed.D. 1992, University of Virginia.

Marilyn Cruz-Alvarez, 1993

Assistant Professor of Biology
B.S. 1979, Universidad Complutense, Madrid, Spain; M.S. 1985, Ph.D. 1987, New York University.

David L. Decker, 1971

Professor of Sociology; Chair, Department of Sociology
B.A. 1967, St. Benedict's College; M.A. 1970, Kansas State University; Ph.D. 1975, University of Missouri, Columbia.

Kathryn Deitch, 1989

Associate Professor of Nursing
B.S.N. 1970, University of Maryland; M.S. 1977, Texas Woman's University; Ph.D. 1991, Claremont Graduate School.

Juan Delgado, 1987

Associate Professor of English
B.A. 1983, California State University, San Bernardino; M.F.A. 1985, University of California, Irvine.

Foad Derakhshan, 1985

Professor of Management
B.S. 1973, Tehran College of Business Sciences; M.B.A. 1976, Ph.D. 1979, Louisiana State University.

Esteban R. Diaz, 1987

Professor of Education
B.S. 1969, University of San Diego; M.Ed. 1973, San Diego State University; Ed.D. 1983, Harvard University.

Lynn Diaz-Rico, 1989

Associate Professor of Education
B.A. 1968, University of Pittsburgh; M.A. Ed. 1977, Arizona State University; Ed.D. 1988, InterAmerican University of Puerto Rico.

Risa E. Dickson, 1991

Assistant Professor of Communication Studies
B.A. 1987, California State University, Northridge; M.A. 1990, Ph.D. 1991, University of Southern California.

Paul K. Dixon, 1992

Assistant Professor of Physics
B.S. 1983, University of Michigan; M.A. 1985, Ph.D. 1990, University of Chicago.

Margaret S. Doane, 1976

Professor of English
B.A. 1970, University of Redlands; M.A. 1971, Northern Arizona University; Ph.D. 1976, University of Oregon.

Patricia L. Domingues, 1993

Assistant Professor of Sociology
B.S. 1977, Oregon State University; B.A. 1986, M.A. 1990, University of California, Riverside.

John R. Dorocak, 1991

Associate Professor of Accounting and Finance
A.B. 1973, Xavier University, Cincinnati, Ohio; J.D. 1977, Case Western Reserve University, Cleveland, Ohio; LLM (Tax) 1990, University of Florida.

Leo G. Doyle, 1971

Professor of Art
B.F.A. 1969, M.F.A. 1971, Rochester Institute of Technology.

Donald A. Drost, 1987

Associate Professor of Management
B.A. 1975, M.B.A. 1977, California State University, Fullerton; Ph.D. 1984, Virginia Polytechnic Institute and State University.

Harold Dyck, 1989

Associate Professor of Information and Decision Sciences
B.A. 1975, University of Kansas; M.S. 1977, Ph.D. 1982, Purdue University.

Richard M. Eberst, 1991

Professor of Health Science; Chair, Department of Health Science and Human Ecology
B.A. 1969, Park College; M.A. 1970, Ball State University; Ph.D. 1977, University of Maryland.

Carolyn R. Eggleston, 1991

Assistant Professor of Education
B.S. 1973, M.A. 1975, Tennessee Tech. University; Ph.D. 1989, Virginia Commonwealth University.

Joanne Eichinger, 1987

Associate Professor of Education
B.S. 1975, M.S. 1978, State University of New York, Buffalo; Ph.D. 1987, Syracuse University.

Cherrlyn F. Eller, 1991

Lecturer in Management
B.A. 1987, M.A. 1988, California State University, San Bernardino.

Stuart R. Ellins, 1973

Professor of Psychology
A.B. 1967, University of Miami; M.A. 1970, Ph.D. 1972, University of Delaware.

Edward J. Erler, 1975

Professor of Political Science
B.A. 1967, San Jose State University; M.A. 1969, Ph.D. 1973, Claremont Graduate School.

Kathryn Ervin, 1989

Associate Professor of Theatre Arts
B.F.A. 1978, Wayne State University; M.F.A. 1980, Illinois State University.

- Anthony H. Evans, 1982
Professor of History; President
B.A. 1959, East Texas Baptist College; M.A. 1961, University of Hawaii; Ph.D. 1966, University of California, Berkeley.
- Bertram H. Fairchild, Jr., 1983
Professor of English
B.A. 1964, M.A. 1968, University of Kansas; Ph.D. 1975, University of Tulsa.
- Kamvar Farahbod, 1991
Associate Professor of Information and Decision Sciences
B.A. 1976, University of Tehran; M.S. 1979, Ph.D. 1986, Oklahoma State University.
- Richard Fehn, 1983
Associate Professor of Biology; Acting Chair, Department of Biology
B.S. 1974, M.S. 1978, California State College, San Bernardino; Ph.D. 1983, University of Arizona.
- Hajrudin Fejzic, 1994
Assistant Professor of Mathematics
B.S. 1987, University of Sarajevo, Sarajevo, Bosnia and Herzegovina; Ph.D. 1992, Michigan State University.
- Louis Fernández, 1991
Professor of Geological Sciences; Vice President for Academic Affairs
B.A. 1962, City College of New York; M.S. 1964, University of Tulsa; Ph.D. 1969, Syracuse University.
- Phyllis F. Fernlund, 1984
Professor of Education; Acting Dean, School of Education
A.B. 1967, M.A.T. 1969, University of Illinois; Ph.D. 1980, Northwestern University.
- James A. Ferrari, 1990
Associate Professor of Biology
B.A. 1975, Queens College, CUNY; M.S. 1979, Ph.D. 1985, University of California, Riverside.
- Charles B. Fields, 1994
Professor of Criminal Justice; Chair, Department of Criminal Justice
B.A. 1980, M.A. 1981, Appalachian State University; Ph.D. 1984, Sam Houston State University.
- Lanny B. Fields, 1985
Professor of History; Chair, Department of History
B.A. 1963, DePauw University; M.A. 1966, University of Hawaii; Ph.D. 1972, Indiana University.
- Loren H. Filbeck, 1972
Professor of Music; Chair, Department of Music
B.A. 1964, M.A. 1968, Occidental College; D.M.A. 1975, University of Illinois.
- Susan M. Finsen, 1986
Associate Professor of Philosophy; Chair, Department of Philosophy
B.A. 1973, Reed College; Ph.D. 1982, Indiana University.
- Cheryl Fischer, 1990
Associate Professor of Education
B.Ed. 1968, M.Ed. 1972, University of Hawaii; Ph.D. 1982, Claremont Graduate School.
- Davida D. Fischman, 1994
Assistant Professor of Mathematics
B.S. 1976, M.S. 1978, Ph.D. 1989, Ben Gurion University.
- Barbara M. Flores, 1987
Professor of Education
B.A. 1970, California State University, Hayward; M.A. 1976, California State University, Sacramento; Ph.D. 1982, University of Arizona.
- Mary Fong, 1992
Assistant Professor of Communication Studies
B.A. 1981, University of Southern California; M.A. 1984, California State University, Long Beach; Ph.D. 1994, University of Washington.
- Christopher F. Freiling, 1983
Professor of Mathematics
B.S. 1975, University of San Francisco; Ph.D. 1981, University of California, Los Angeles.
- Jerry A. Freischlag, 1987
Professor of Physical Education
B.S. 1964, Ithaca College; M.A. 1967, Stanford University; Ph.D. 1971, Florida State University.
- Joan E. Fryxell, 1989
Associate Professor of Geological Sciences
B.A. 1977, Earlham College; M.A. 1980, University of Texas; Ph.D. 1984, University of North Carolina.
- Louise F. Fulton, 1982
Professor of Education
B.S. 1958, Auburn University; M.S. 1972, Jacksonville State University; Ed.S. 1976, Ed.D. 1981, The University of Alabama.
- M. Antoinetta Gallegos-Ruiz, 1990
Assistant Professor of Spanish
B.A. 1976, M.A. 1979, California State University, Los Angeles; Ph.D. 1987, University of Southern California.
- Beverly Gallo, 1989
Lecturer in Philosophy
B.A. 1971, M.A. 1984, San Jose State University; Ph.D. 1989, University of California, Riverside.
- Vijay Ganji, 1994
Assistant Professor of Health Science and Human Ecology
B.S. 1981, Sri Venkateswara University, Tirupati, India; M.Sc. 1984, National Dairy Research Institute, Karnal, India; M.S. 1989, Ph.D. 1991, University of Nebraska.
- Catherine C. Gannon, 1976
Professor of English
B.A. 1963, M.A. 1965, Ph.D. 1972, University of California, Los Angeles.
- Thom G. Gehring, 1991
Assistant Professor of Education
B.A. 1972, Trenton State College; M.Ed. 1975, Ph.D. 1987, Virginia Commonwealth University.
- George M. Georgiou, 1992
Assistant Professor of Computer Science
B.S.E.E. 1985, Louisiana Tech University; M.S.E.E. 1987, M.S. 1988, Louisiana State University; M.S., 1990, Ph.D. 1992, Tulane University.

- Rosalie Giacchino-Baker, 1992
Associate Professor of Education
B.A. 1966, College of St. Francis; M.A. 1971, Michigan State University; Ph.D. 1991, Claremont Graduate School.
- Gregory W. Gilbert, 1990
Lecturer in English
B.A. 1982, M.A. 1989, California State University, San Bernardino.
- Janelle Gilbert, 1994
Assistant Professor of Psychology
B.A. 1988, New York University; M.A. 1990, Ph.D. 1994, George Mason University.
- Jennie Gilbert, 1989
Associate Professor of Physical Education
B.S. 1977, Pennsylvania State University; M.A. 1979, Western Michigan University; Ph.D. 1989, University of Illinois.
- Morley D. Glicken, 1988
Professor of Social Work
B.P. 1963, University of North Dakota; M.S.W. 1964, University of Washington; D.S.W. 1977, University of Utah.
- Bruce Golden, 1965
Professor of English
B.S. 1955, Northwestern University; M.A. 1958, Ph.D. 1966, Columbia University.
- Cristina Gomez-Valdez, 1994
Assistant Professor of Education
B.S.N. 1983, M.S.N. 1989, University of San Diego; Ed.D. 1993, University of San Francisco.
- Luis S. Gonzalez, 1992
Assistant Professor of Music
B.M. 1977, M.M. 1980, University of Pacific.
- Mirta A. Gonzalez, 1989
Associate Professor of Spanish
B.S. 1971, University of Kansas; M.A. 1973, Ohio University; M.A. 1982, California State University, Los Angeles; Ph.D. 1990, University of Southern California.
- Rosa Gonzalez, 1989
Lecturer in Education
B.A. 1971, Texas Tech University, Lubbock; M.Ed. 1975, University of Wisconsin, Whitewater.
- Mary Goodwin, 1991
Assistant Professor of Art
B.A. 1975, University of California, Santa Cruz; M.A. 1979, Ph.D. 1990, Boston University.
- Joseph W. Gray, 1969
Associate Professor of Education
B.A. 1958, M.A. 1969, University of Redlands.
- Sue Greenfield, 1987
Professor of Management
B.A. 1968, Whittier College; M.B.A. 1973, California State University, Los Angeles; D.B.A. 1978, University of Southern California.
- Chris C. Grenfell, 1975
Professor of Physical Education
A.B. 1971, San Diego State University; M.S. 1973, University of California, Los Angeles; Ph.D. 1984, University of Southern California.
- Gary R. Griffing, 1987
Associate Professor of Mathematics
B.S. 1981, M.S. 1984, Ph.D. 1986, University of California, Riverside.
- Richard W. Griffiths, 1978
Professor of Education
B.S. 1955, M.S. 1962, Illinois State University; Ph.D. 1970, University of Illinois.
- Ellen R. Gruenbaum, 1986
Professor of Anthropology; Acting Dean, School of Social and Behavioral Sciences
A.B. 1970, Stanford University; M.A. 1974, Ph.D. 1982, University of Connecticut.
- Juan M. Gutierrez, 1987
Associate Professor of Education
B.A. 1972, California State University, San Bernardino; M.A. 1974, M.A. 1976, Ph.D. 1986, Stanford University.
- Paul D. Guymon, 1990
Lecturer in Criminal Justice
B.A. 1977, Utah State University; J.D. 1980, Western State University College of Law.
- Jeffrey D. Hackel, 1990
Assistant Professor of Geography
B.A. 1968, University of California, Berkeley; M.A. 1975, California State University, Hayward; Ph.D. 1988, University of California, Riverside.
- Joan T. Hallett, 1981
Professor of Mathematics
B.Sc. 1957, University of Exeter; Ph.D. 1961, University of London.
- Diane F. Halpern, 1981
Professor of Psychology
B.A. 1969, University of Pennsylvania; M.A. 1973, Temple University; M.A. 1977, Ph.D. 1979, University of Cincinnati.
- Lee W. Hanson, 1991
Associate Professor of Management
B.A. 1977, Indiana University; M.P.A. 1980, California State University, Long Beach; Ph.D. 1992, University of California, Irvine.
- Cheryl D. Harris, 1990
Assistant Professor of Communication Studies
B.A. 1982, M.A. 1984, Ohio State University; Ph.D. 1992, University of Massachusetts-Amherst.
- Tamara L. Harsh, 1994
Assistant Professor of Music
B.Mus.Ed. 1984, Baldwin-Wallace College; M.Mus. 1986, Syracuse University.
- Zahid Hasan, 1985
Professor of Mathematics
B.S. 1973, M.S. 1976, University of Punjab, Pakistan; Ph.D. 1982, University of Birmingham, England.
- John M. Hatton, 1967
Associate Professor of Psychology; Director, Counseling and Health Services
B.A. 1961, University of Minnesota; Ph.D. 1965, Stanford University.

- Carol P. Haviland, 1987
Assistant Professor of English
B.A. 1962, Loma Linda University; M.A. 1969, Boston College;
Ph.D. 1994, University of California, Riverside.
- Frederick Hebein, 1989
Associate Professor of Marketing
P.D. 1969, Colorado School of Mines; M.A. 1971, Ph.D. 1972,
Southern Methodist University.
- John W. Heeren, 1971
Professor of Sociology
A.B. 1966, M.A. 1968, University of California, Riverside; Ph.D.
1975, Duke University.
- Craig Henderson, 1977
Student Services Counselor and Coordinator, Student Conduct
B.A. 1967, Rutgers University; M.A. 1968, Colgate University;
Ph.D. 1976, University of Denver.
- Beverly L. Hendricks, 1986
*Professor of Communication Studies; Dean, School of
Humanities*
B.S. 1956, University of Wisconsin, Milwaukee; M.A. 1958,
Ph.D. 1966, Northwestern University.
- Lincol G. Henry, 1985
*Associate Professor of Accounting and Finance; Chair,
Department of Accounting and Finance*
B.S. 1968, Atlantic Union College; M.S. 1973, Long Island
University.
- Mildred M. Henry, 1983
Associate Professor of Education
B.S. 1971, Agricultural, Mechanical and Normal College; M.S.Ed.
1976, Ph.D. 1983, Southern Illinois University.
- Jose S. Hernandez, 1991
Associate Professor of Education
B.A. 1973, Stanislaus State College; M.A. 1982, San Jose State
University; M.A. 1984, Ph.D. 1986, Stanford University.
- J. Francisco Hidalgo, 1989
Professor of Education
B.A. 1969, Loyola-Marymount University; M.S. 1971, Ph.D.
1977, University of Southern California.
- Gale K. Hirsch, 1994
Lecturer in Nursing
B.S.N. 1982, M.S.N. 1985, Loma Linda University.
- Charles D. Hoffman, 1974
Professor of Psychology; Chair, Department of Psychology
B.S. 1967, Ph.D. 1972, Adelphi University.
- Peter Holliday, 1989
Assistant Professor of Art
B.A. 1975, Columbia College/University; M.A. 1977, Ph.D.
1983, Yale University.
- Irvin Howard, 1981
Professor of Education
B.S. 1974, M.S. 1977, Ed.D. 1980, Illinois State University.
- Sherry M. Howie, 1987
Professor of Education
B.A. 1961, University of California, Los Angeles; M.A. 1976,
Ph.D. 1979, University of Colorado.
- Sung-Kyoo Huh, 1987
Associate Professor of Accounting and Finance
B.E. 1977, Korea University; M.B.A. 1982, State University of
New York, Buffalo; Ph.D. 1988, Kent State University.
- Marjorie E. Hunt, 1990
Assistant Professor of Social Work
B.A. 1972, University of Albuquerque; M.A. 1977, St. Mary's
University; Ph.D. 1989, University of California, Berkeley.
- Sung-Heh Hyon, 1994
Assistant Professor of English
B.A. 1989, University of California, San Diego.
- Dennis L. Ikenberry, 1965
Professor of Computer Science
B.A. 1961, Occidental College; M.A. 1965, Ph.D. 1965,
University of California, Riverside.
- Fred E. Jandt, 1983
Professor of Communication Studies
B.A. 1966, Texas Lutheran College; M.A. 1967, Stephen F.
Austin State University; Ph.D. 1970, Bowling Green State
University.
- Todd E. Jennings, 1990
Assistant Professor of Education
B.A. 1983, Biola University; M.A. 1989, Ph.D. 1991, Claremont
Graduate School.
- Joseph Jesunathadas, 1983
Associate Professor of Education
B.S. 1973, Kerala University; M.S. 1985, Ed.D. 1990, Utah State
University.
- Jotindar S. Johar, 1984
Professor of Marketing
B.S. 1962, Delhi University; LL.B. 1965, Poona University;
M.B.A. 1973, Ph.D. 1984, McGill University, Montreal.
- Jorun B. Johns, 1965
Professor of German
Ph.D. 1956, University of Vienna.
- Kenneth M. Johns, 1985
Associate Professor of Education
B.A. 1962, M.A. 1968, Sonoma State University; Ph.D. 1985,
University of Arizona.
- Richard M. Johnston, 1990
Professor of Art; Chair, Department of Art
B.A. 1966, California State University, Long Beach; M.F.A. 1968,
Cranbrook Academy of Art.
- L. Lynn Judd, 1987
Professor of Marketing
B.B.A. 1956, M.B.A. 1976, Ph.D. 1980, North Texas State
University.
- N. Laura Kamptner, 1984
Professor of Psychology
B.S. 1976, San Diego State University; M.S. 1979, University of
California, Davis; Ph.D. 1984, Michigan State University.
- Sandra D. Kamusikiri, 1984
Associate Professor of English
B.A. 1971, M.A. 1973, Ph.D. 1985, University of California,
Riverside.

- Julius David Kaplan, 1977
Professor of Art; Dean, Graduate Studies
B.A. 1963, Wesleyan University; M.A. 1965, Ph.D. 1972, Columbia University.
- Yasha Karant, 1989
Associate Professor of Information and Decision Sciences
B.A. 1975, Immaculate Heart/Cal Tech; Ph.D. 1981, University of California, Berkeley.
- Martha P. Kazlo, 1976
Counselor, Counseling Center
B.S. 1967, MED 1972, Ph.D., 1975, University of Maryland.
- Patricia R. Kelly, 1990
Associate Professor of Education
B.S. 1965, Simmons College; M.A. 1983, San Diego State University; Ph.D. 1988, San Diego State University/Claremont Graduate Schools.
- Mary E. Kelsey, 1994
Assistant Professor of Sociology
B.A. 1976, University of Wisconsin Madison; M.A. 1986, Ph.D. 1994, University of California, Berkeley.
- Sant K. Khalsa, 1988
Associate Professor of Art
B.F.A. 1973, Maryland Institute College of Art; M.A. 1983, M.F.A. 1990, California State University, Fullerton.
- Rauf A. Khan, 1976
Professor of Accounting and Finance
B.S. 1958, Montana State University; M.B.A. 1967, University of Montana; D.B.A. 1973, University of Colorado.
- Brij B. Khare, 1968
Professor of Political Science
B.S. 1953, Agra, India; M.S. 1959, University of Toronto; M.A. 1963, Ph.D. 1968, University of Missouri, Columbia.
- Dong M. Kim, 1990
Associate Professor of Accounting and Finance
B.S. 1978, So Gang University; M.B.A. 1984, West Georgia College; Ph.D. 1990, Arizona State University.
- Jeanne C. King, 1990
Associate Professor of Management
B.A. 1977, M.A. 1980, California State University, Fullerton; Ph.D. 1992, Claremont Graduate School.
- Adria Klein, 1976
Professor of Education
B.A. 1968, George Peabody College; M.A. 1970, West Virginia University; Ph.D. 1979, University of New Mexico.
- Elizabeth A. Klonoff, 1988
Professor of Psychology
A.B. 1972, Brandeis University; M.A. 1976, Ph.D. 1977, University of Oregon.
- Barry A. Knight, 1990
Professor of Accounting and Finance
B.S. 1960, University of California, Los Angeles; M.B.A. 1971, D.B.A. 1976, University of Southern California.
- Karen Kolehmainen, 1988
Associate Professor of Physics
B.S. 1977, Michigan State University; Ph.D. 1983, State University of New York at Stony Brook.
- Leslie M. Kong, 1990
Associate Librarian; Head, Public Services
B.A. 1975, San Francisco State University; M.L.S. 1977, University of California, Berkeley; M.B.A. 1987, California State University, Sacramento.
- Kazim Konyar, 1991
Assistant Professor of Economics
B.A. 1977, San Diego State University; M.A. 1980, Ph.D. 1975, University of California, Riverside.
- Hideya Koshino, 1994
Assistant Professor of Psychology
B.A. 1983, M.A. 1985, International Christian University, Tokyo; Ph.D. 1994, University of Kansas.
- Mary L. Kornguth, 1988
Professor of Nursing
B.S.N. 1967, Wayne State University; M.S. 1974, State University of New York, Buffalo; M.A., Ph.D. 1987, Vanderbilt University.
- Janet L. Kottke, 1984
Associate Professor of Psychology
B.A. 1978, Wartburg College; M.S. 1981, Ph.D. 1985, Iowa State University.
- Larry L. Kramer, 1968
Professor of English
B.A. 1961, M.A. 1963, The Ohio State University; M.F.A. 1968, The University of Iowa.
- Guenther G. Kress, 1987
Professor of Public Administration
B.A. 1965, T. H. Darmstadt, Federal Republic of Germany; M.A. 1967, Ph.D. 1972, University of California, Davis.
- Joan H. Kritzberg, 1987
Professor of Management
B.A. 1975, M.A. 1977, Western State College of Colorado; J.D. 1984, Brigham Young University.
- Ellen L. Kronowitz, 1978
Professor of Education
B.A. 1966, Queens College; M.A. 1969, Ed.M. 1974, Ed.D. 1976, Teachers College, Columbia University.
- Kevin G. Lamude, 1991
Associate Professor of Communication Studies
B.U.S. 1981, M.A. 1983, University of New Mexico; Ph.D. 1989, University of Utah.
- Michael C. LeMay, 1992
Professor of Political Science; Chair, Department of Political Science
B.S. 1966, M.S. 1967, University of Wisconsin-Milwaukee; Ph.D. 1971, University of Minnesota.
- Kenneth Lane, 1989
Professor of Education
B.S. 1969, Indiana State University; M.Ed. 1973, University of Missouri; Ed.D. 1983, East Texas State University.
- Barbara D. Larrivee, 1988
Professor of Education
B.A. 1969, Westfield State College; M.Ed. 1973, Ed.D. 1975, University of Massachusetts.

Janice M. Layton, 1985

Professor of Nursing

B.S. 1964, M.S.N. 1965, Wayne State University; Ph.D. 1978, Michigan State University.

W. Britt Leatham, 1987

Associate Professor of Geological Sciences

B.A. 1981, Weber State College, Utah; M.S. 1984, Ph.D. 1987, Ohio State University.

Steven M. Levy, 1983

Professor of Management

B.A. 1967, University of Rochester; M.S. 1969, Cornell University; Ph.D. 1978, George Washington University.

Eldon C. Lewis, 1987

Professor of Accounting and Finance; Interim Dean, School of Business and Public Administration

B.B.A. 1959, Washburn University; M.B.A. 1961, University of Kansas; Ph.D. 1967, University of Missouri.

Denis R. Lichtman, 1969

Associate Professor of Mathematics

B.A. 1959, University of Pittsburgh; M.A. 1963, Ph.D. 1968, University of Washington.

Frank M. Lin, 1991

Associate Professor of Information and Decision Sciences

B.S. 1981, Tatung Institute of Tech; M.B.A. 1986, Ph.D. 1991, SUNY at Buffalo.

Roger P. Lintault, 1969

Professor of Art

B.S. 1960, State University of New York; M.F.A. 1962, Southern Illinois University.

Fook Fah Liu, 1970

Professor of Computer Science

B.Sc. 1956, Presidency College, India; M.S. 1983, University of Illinois; Ph.D. 1962, Purdue University.

Michael E. Loik, 1994

Assistant Professor of Biology

B.S. 1984, M.S. 1986, University of Toronto; Ph.D. 1992, University of California, Los Angeles.

Dominique M. Louisor, 1993

Assistant Professor of Spanish

B.A. 1983, M.A. 1984, Ph.D. 1992, Universite de Paris IV-Sorbonne.

Janice Loutzenhiser, 1976

Associate Professor of Management

B.A. 1970, University of Southern California; M.A. 1972, George Washington University; J.D. 1975, University of Virginia.

Joseph B. Lovell, 1981

Lecturer in Management

B.S. 1963, Drake University; M.B.A. 1966, Creighton University.

Joseph Lovett, 1989

Associate Professor of Health Science and Human Ecology

B.S. 1964, University of Pennsylvania; Ph.D. 1987, University of Michigan.

Lee A. Lyons, 1990

Associate Professor of Theatre Arts

B.F.A. 1982, M.F.A. 1988, San Diego State University.

Loralee MacPike, 1978

Professor of English; Acting Chair, Department of English

B.A. 1960, Bryn Mawr College; M.A. 1970, California State University, Hayward; Ph.D. 1976, University of California, Los Angeles.

Ward M. McAfee, 1965

Professor of History

A.B. 1961, M.A. 1962, Ph.D. 1965, Stanford University.

Marjorie McCabe, 1990

Associate Professor of Education

B.S. 1976, M.Ed. 1977, Suffolk University; Ph.D. 1986, University of Southern California.

Rosemary McCaslin, 1990

Professor of Social Work; Chair, Department of Social Work

B.A. 1970, University of Texas at Austin; A.M. 1973, Ph.D. 1980, University of Chicago.

Faith H. McClure, 1990

Assistant Professor of Psychology

B.A. 1979, Fresno Pacific College; M.S. 1982, California State University, Fresno; Ph.D. 1989, University of California, Los Angeles.

Jack McDonnell, 1969

Professor of Information and Decision Sciences

B.S. 1955, Bowling Green State University; M.B.E. 1967, Ph.D. 1974, Claremont Graduate School.

Sanders McDougall, 1991

Associate Professor of Psychology

B.A. 1979, M.A. 1981, West Washington University; Ph.D. 1988, University of Kentucky.

Theodore R. McDowell, 1983

Professor of Geography; Chair, Department of Geography

B.S. 1969, B.S. 1972, M.S. 1975, Brigham Young University; Ph.D. 1980, Oregon State University.

Larry E. McFatter, 1983

Professor of Music

B.M. 1977, Belmont College; M.M. 1979, D.M.A. 1983, Memphis State University.

Sally McGill, 1991

Assistant Professor of Geological Sciences

A.B. 1985, Harvard & Radcliffe; M.S. 1989, California Institute of Technology; Ph.D. 1992, California Institute of Technology.

George McGinnis, 1989

Professor of Art

Patrick S. McInturff, Jr., 1978

Professor of Management

B.S. 1972, M.A. 1974, University of California, Riverside; J.D. 1976, La Verne University; Ph.D. 1979, University of California, Riverside.

Donna M. McMahon, 1990

Associate Professor of Spanish

B.A. 1979, M.A. 1983, Ph.D. 1990, University of Pennsylvania.

Jeffrey McNair, 1989

Associate Professor of Education

B.A. 1978, Wheaton College; M.A. 1982, California State University, Los Angeles; Ph.D. 1989, University of Illinois.

Marilyn D. McShane, 1990

Associate Professor of Criminal Justice

B.S. 1979, American Technological University; M.S. 1981, Clark University; Ph.D. 1985, Sam Houston State University.

Glenn Eamon Maguire, 1994

Lecturer in Chemistry

B.Sc. 1989, St. Patricks College Maynooth, National University of Ireland; Ph.D. 1993, Queens University, Northern Ireland.

Kenneth A. Mantei, 1968

Professor of Chemistry

A.B. 1962, Pomona College; Ph.D. 1967, Indiana University.

Alemayehu Mariam, 1989

Professor of Political Science

B.A. 1974, Augusta College; M.A. 1975, University of Northern Iowa; Ph.D. 1984, University of Minnesota; J.D. 1988, University of Maryland.

Norton E. Marks, 1990

Professor of Marketing

B.S. 1960, University of Nebraska, Omaha; M.B.A. 1961, Indiana University; Ph.D. 1971, University of Washington.

Carolyn A. Martin, 1974

Professor of Physical Education

B.S. 1968, Lincoln University; M.A. 1974, California State Polytechnic University, Pomona; Ph.D. 1994, Pepperdine University.

Nancy Mary, 1989

Assistant Professor of Social Work

B.A. 1968, Pitzer College; M.S.W. 1977, D.S.W. 1986, University of California, Los Angeles.

James Mason, 1992

Assistant Professor of Education

B.A. 1963, Ball State University; M.A.T. 1967, Ph.D. 1988, Purdue University.

Dolores L. Matthews, 1989

Lecturer in Mathematics

B.S. 1961, Clarion State College; M.A. 1963, Washington State University.

David F. Maynard, 1993

Assistant Professor of Chemistry

B.S. 1976, California State University, San Bernardino; M.S. 1988, California State University, Long Beach; Ph.D. 1992, University of California, Riverside.

Clark Mayo, 1967

Professor of English

B.A. 1960, Brown University; M.Th. 1963, Union Theological Seminary; M.A. 1965, Ph.D. 1971, University of Chicago.

Norman Meek, 1989

Assistant Professor of Geography

B.A. 1982, University of Kansas; M.A. 1984, Michigan State University; Ph.D. 1990, University of California, Los Angeles.

James M. Mehegan, 1988

Associate Professor of Geological Sciences; Chair, Department of Geological Sciences

B.S. 1978, M.S. 1982, University of California, Riverside; Ph.D. 1987, Dalhousie University, Canada.

Susan Meisenhelder, 1982

Professor of English

B.A. 1973, M.A. 1975, University of Florida; Ph.D. 1983, University of California, Riverside.

Thomas M. Meisenhelder, 1975

Professor of Sociology

B.A. 1968, Wake Forest University; M.A. 1972, Ph.D. 1975, University of Florida.

Josephine G. Mendoza, 1984

Associate Professor of Computer Science

B.S. 1974, M.Eng. 1977, University of the Philippines; Ph.D. 1984, University of Illinois.

Randi L. Miller, 1987

Associate Professor of Sociology

B.A. 1975, State University of New York, New Paltz; M.A. 1979, Ph.D. 1986, University of Connecticut.

Larry M. Mink, 1992

Assistant Professor of Chemistry

B.S. 1984, Hebrew University of Jerusalem; M.S. 1986, Ph.D. 1990, University of California, Riverside.

Clark Molstad, 1984

Professor of Management

B.A. 1970, California State University, Los Angeles; M.A. 1973, Ph.D. 1989, University of California, Los Angeles.

Craig Monroe, 1993

Professor of Communication Studies; Chair, Department of Communication Studies

B.A. 1964, Central (Oklahoma) State University; M.S. 1966, Emporia (Kansas) State University; Ph.D. 1978, University of Nebraska-Lincoln.

Thomas E. Moody, 1985

Associate Professor of Philosophy

B.A. 1970, University of Wisconsin; Ph.D. 1982, University of Minnesota.

Joseph R. Moran, 1972

Professor of Art

B.A. 1970, University of California, Riverside; M.F.A. 1972, Claremont Graduate School.

Teresa Morris, 1989

Associate Professor of Social Work

B.Sc. 1971, University of Loughborough, England; M.S.W. 1984, University of Hawaii; D.S.W. 1988, University of California, Berkeley.

Kelly Morton, 1989

Assistant Professor of Psychology

B.S. 1983, Radford University; M.A. 1985, Wake Forest University; Ph.D. 1990, Bowling Green State University.

Richard L. Moss, 1973

Professor of Economics

B.A. 1963, University of Minnesota; M.A. 1970, Ph.D. 1973, University of New Mexico.

T. Patrick Mullen, 1981

Professor of Education

B.A. 1960, Whittier College; M.A. 1970, Ph.D. 1971, University of Minnesota.

- James L. Mulvihill, 1981
Professor of Geography
B.A. 1968, M.A. 1972, State University of New York at Buffalo;
Ph.D. 1976, Michigan State University.
- Owen J. Murphy, 1990
Professor of Computer Science; Chair, Department of Computer Science
B.A. 1979, Holy Cross; M.S. 1982, Worcester Polytechnic Institute; Ph.D. 1985, Syracuse University.
- Gary A. Negin, 1985
Professor of Education
B.A. 1971, University of Notre Dame; M.Ed. 1974, Florida Atlantic University; M.A. 1988, Marquette University; Ph.D. 1977, University of Minnesota.
- Taft Newman, 1978
Director, Educational Opportunity Program
B.A. 1978, M.S. 1980, California State University, San Bernardino.
- Frederick A. Newton, 1975
Professor of Psychology
B.S. 1967, St. Peter's College; M.S. 1970, Villanova University; Ph.D. 1975, University of Houston.
- Eric Nilsson, 1989
Assistant Professor of Economics
A.B. 1979, University of California, Berkeley; Ph.D. 1989, University of Massachusetts, Amherst.
- Hannah L. Nissen, 1992
Assistant Professor of Psychology
B.S. 1980, Iowa State University; M.S. 1987, Ph.D. 1992, Ohio State University.
- Linda L. Norman, 1988
Assistant Professor of Political Science
B.A. 1982, California State University, San Bernardino; M.A. 1986, Claremont Graduate School; Ph.D. 1991, University of California, Davis.
- Ruth A. Norton, 1985
Professor of Education
B.A. 1969, University of Northern Iowa; M.S. 1984, Ed.D. 1985, Syracuse University.
- David H. Null, 1977
Associate Professor of Health Science and Human Ecology
B.A. 1964, University of California, Riverside; M.A. 1970, California State University, Hayward; Ph.D. 1975, University of California, Berkeley.
- James S. Okon, 1981
Professor of Mathematics
B.S. 1974, University of California, Riverside; M.S. 1976, Michigan State University; Ph.D. 1980, University of California, Riverside.
- Walter C. Oliver, 1969
Professor of Spanish
B.A. 1963, New Mexico State University; M.A. 1966, Ph.D. 1970, University of New Mexico.
- Eugene Page, 1989
Assistant Professor of English
B.A. 1964, Oberlin College; M.A. 1966, Washington University; Ph.D. 1973, Johns Hopkins University.
- Elinore H. Partridge, 1981
Associate Professor of English
B.A. 1958, University of Utah; M.A. 1963, New York University; Ph.D. 1970, University of California, Davis.
- Cynthia V. Pastrana, 1991
Lecturer in English
B.A. 1987, M.A. 1990, California State University, Long Beach.
- Gary D. Patterson, 1987
Assistant Professor of Management
B.A. 1973, B.S. 1973, California State University, Fresno; M.A. 1976, Indiana University, Bloomington; J.D. 1983, Western State University, Fullerton.
- Pola N. Patterson, 1978
Librarian
B.A. 1970, M.S. 1971, University of Illinois.
- Cynthia L. Paxton, 1979
Professor of Health Science and Human Ecology
B.S. 1973, California State University, Chico; M.A. 1974, San Diego State University; Ph.D. 1979, University of Oregon.
- M. Jean Peacock, 1993
Assistant Professor of Psychology
B.A. 1975, M.A. 1979, California State University, San Bernardino; Ph.D. 1993, University of California, Riverside.
- Lloyd E. Peake, 1990
Assistant Professor of Management
B.A. 1970, University of Southern California; J.D. 1974, Southwestern University.
- Dennis M. Pederson, 1970
Professor of Chemistry
B.S. 1962, University of Puget Sound; Ph.D. 1968, Purdue University.
- Ronald K. Pendleton, 1981
Professor of Education
B.A. 1964, California State College, Humboldt; M.A. 1978, California State University, Long Beach; Ph.D. 1981, Arizona State University.
- Meryl B. Perlson, 1993
Assistant Professor of Communication Studies
B.A. 1985, Rutgers University; M.F.A. 1993, Temple University.
- Margaret A. Perry, 1987
Associate Professor of Theatre Arts
B.A. 1975, M.F.A. 1985, San Diego State University.
- Stuart M. Persell, 1967
Professor of History
B.A. 1962, University of California, Santa Barbara; M.A. 1963, Ph.D. 1969, Stanford University.
- Bonnie L. Petry, 1992
Senior Assistant Librarian
B.A., 1979, California State University, Sacramento; M.L.S. 1988, University of California, Los Angeles.
- Bryan L. Pettit, 1988
Lecturer in Information and Decision Sciences
B.A. 1971, Brigham Young University; M.B.A. 1972, University of Utah; M.S. 1991, Clemson University.

Stephen L. Petty, 1994

Lecturer in Social Work

B.S. 1964, M.S.W. 1967, University of Utah.

Thomas J. Pierce, 1976

Professor of Economics

B.A. 1971, La Salle College; M.A. 1975, Ph.D. 1976, University of Notre Dame.

James C. Pierson, 1971

Professor of Anthropology

B.A. 1965, M.A. 1969, Sacramento State College; Ph.D. 1972, Washington University.

Renee Pigeon, 1990

Associate Professor of English

B.A. 1978, University of California, Santa Barbara; M.A. 1984, Ph.D. 1988, University of California, Los Angeles.

Dian Pizurie, 1989

Assistant Professor of English

B.A. 1981, M.A. 1983, California State University, Fullerton; Ph.D. 1990, University of California, Riverside.

David Polcyn, 1988

Associate Professor of Biology

B.A. 1981, California State University, Fullerton; M.A. 1983, Ph.D. 1988, University of California, Riverside.

Lee Porter, 1981

Professor of Education; Dean, Extended Education

B.S. 1958, State University of New York College at Oswego; M.A. 1960, Ed.D. 1969, Syracuse University.

Chetan Prakash, 1984

Professor of Mathematics

B.S. 1971, M.Sc. 1973, Delhi University; M.S. 1977, Ph.D. 1982, Cornell University.

Gregory L. Price, 1971

Professor of Physical Education

B.S. 1969, Fort Hays Kansas State College; M.S. 1972, California State College, Long Beach; Ed.D. 1978, Brigham Young University.

Reginald L. Price, 1978

Professor of Physical Education

B.S. 1964, MacMurray College; M.A. 1967, The Ohio State University; Ed.D. 1973, Oklahoma State University.

Jerrold E. Pritchard, 1983

Professor of Music; Associate Vice President, Academic Programs

B.A. 1964, M.A. 1966, California State University, Sacramento; D.M.A. 1969, University of Washington.

S.E.C. Purvis, 1993

Professor of Accounting and Finance

B.A. 1972, University of Reading, Berkshire, England; M.Phil. 1981, Ph.D. 1985, Columbia University.

James V. Radomski, 1994

Lecturer in Music

B.M., B.A. 1976, Oberlin College; M.A. 1981, University of California, Berkeley; Ph.D. 1992, University of California, Los Angeles.

Johnnie Ann Ralph, 1971

University Librarian

B.A. 1967, M.A. 1969, University of California, Riverside; M.L.S. 1970, University of Kentucky.

Kellie Rayburn, 1989

Lecturer in English

B.A. 1985, M.A. 1989, California State University, San Bernardino.

Nabil Y. Razzouk, 1982

Professor of Marketing; Chair, Department of Marketing

B.A. 1969, Middle East College, Lebanon; M.B.A. 1973, Andrews University; Ph.D. 1980, Arizona State University.

Patricia D. Reed, 1988

Lecturer in Management

B.A. 1984, M.A. 1986, California State University, San Bernardino.

Kathryn C. Reilly, 1987

Associate Professor of Education

A.B. 1967, Smith College; M.A. 1969, Smith College and the Free University of Berlin; M.S. 1972, Southern Illinois University, Edwardsville; Ph.D. 1978, St. Louis University.

Paul A. Renteln, 1991

Assistant Professor of Physics

B.A. 1981, University of California, Berkeley; Ph.D. 1988, Harvard University.

Ernesto M. Reza, 1987

Associate Professor of Management

B.A. 1977, Pitzer College; M.A. 1982, Ph.D. 1992, University of Michigan.

Robert B. Ricco, 1992

Assistant Professor of Psychology

B.A. 1980, New York University; Ph.D. 1987, Temple University.

Jerrell R. Richer, 1991

Associate Professor of Economics

B.A. 1985, Goshen; M.A. 1988, Ph.D. 1991, University of California, Santa Barbara.

David M. Riefer, 1987

Professor of Psychology

B.A. 1975, University of California, Los Angeles; Ph.D. 1981, University of California, Irvine.

Cheryl A. Riggs, 1988

Associate Professor of History

B.A. 1980, M.A. 1982, Ph.D. 1989, University of California, Santa Barbara.

Iris Riggs, 1988

Associate Professor of Education

B.A. 1981, Bethany College; M.S. 1985, Ph.D. 1988, Kansas State University.

Matt L. Riggs, 1988

Associate Professor of Psychology

B.A. 1979, Bethany College; M.S. 1986, Ph.D. 1988, Kansas State University.

Dan C. Rinne, 1982

Professor of Mathematics

B.S. 1975, University of Missouri, Columbia; M.A., Ph.D. 1979, University of California, Santa Barbara.

Terry L. Rizzo, 1988

Associate Professor of Physical Education

B.A. 1973, Northeastern Illinois University; M.Ed. 1974, University of Arizona; Ph.D. 1983, University of Illinois, Urbana-Champaign.

Peter Robertshaw, 1989

Professor of Anthropology

B.A. 1973, M.A. 1977, Ph.D. 1980, Cambridge University.

Sylvester E. Robertson, 1990

Lecturer in Education

B.S. 1959, Drake University; M.S. 1972, Governors State University; M.S. 1985 Pepperdine University.

J. Cordell Robinson, 1971

Professor of History; Associate Vice President, Academic Personnel

B.A. 1963, Columbia Union College; M.A. 1968, Ph.D. 1971, Indiana University.

James G. Rogers, 1974

Professor of Management; Chair, Department of Management

A.B. 1949, Yale University; M.S. 1963, M.A. 1970, Ph.D. 1974, University of California, Los Angeles.

C. E. Tapie Rohm, Jr., 1983

Professor of Information and Decision Sciences; Chair, Department of Information and Decision Sciences

B.S. 1973, M.A. 1974, Brigham Young University; Ph.D. 1977, Ohio University.

Nancy E. Rose, 1985

Professor of Economics

B.A. 1968, University of California, Berkeley; M.S.W. 1973, University of North Carolina; Ph.D. 1985, University of Massachusetts, Amherst.

Richard H. Rowland, 1975

Professor of Geography

B.A. 1965, San Diego State University; Ph.D. 1971, Columbia University.

Tony D. Roy, 1992

Assistant Professor of Philosophy

B.A. 1979, M.A. 1988, University of California, San Diego; Ph.D. 1991, University of California, Davis.

Amanda Sue Rudisill, 1969

Professor of Theatre Arts

B.S. 1964, Millersville State College; M.A. 1966, Pennsylvania State University; Ph.D. 1972, Northwestern University.

Treadwell Ruml, II, 1990

Associate Professor of English

A.B. 1974, Harvard College; M.A. 1982, Ph.D. 1989, University of Virginia.

DeShea R. Rushing, 1985

Lecturer in English

B.A. 1981, California State University, Long Beach; M.A. 1983, California State University, San Bernardino.

Elisabeth K. Ryland, 1986

Professor of Management

B.A. 1965, University of Copenhagen, Denmark; M.A. 1965, M.B.A. 1980, Florida State University; Ph.D. 1986, University of North Carolina at Chapel Hill.

Judith M. Rymer, 1970

Professor of Education; Vice President for University Relations

B.S. in Ed. 1961, Miami University; M.A. 1966, University of Kansas; Ph.D. 1970, The Ohio State University.

Ralph H. Salmi, 1990

Assistant Professor of Political Science

B.A. 1978, California State University, San Bernardino; M.A. 1981, Ph.D. 1990, University of California, Riverside.

Arthur I. Saltzman, 1984

Professor of Marketing

B.S. 1960, Brooklyn College; M.S. 1966, Massachusetts Institute of Technology; Ph.D. 1982, University of California, Irvine.

Ruth A. Sandlin, 1988

Associate Professor of Education

B.A. 1982, M.A. 1983, Ph.D. 1988, University of California, Riverside.

Rowena S. Santiago, 1990

Associate Professor of Education

B.S. 1971, Philippine Normal College; M.A. 1985, Tokyo Gakugei University; Ed.D. 1990, University of Georgia.

Pedro Santoni, 1988

Assistant Professor of History

B.A. 1978, University of Notre Dame; J.D. 1981, University of Puerto Rico; Ph.D. 1987, El Colegio de Mexico.

John Sarli, 1983

Professor of Mathematics

A.B. 1974, Brown University; Ph.D. 1984, University of California, Santa Cruz.

Gerard T. Saucier, 1993

Assistant Professor of Psychology

B.A. 1978, University of North Carolina; M.A. 1984, John F. Kennedy University; Ph.D. 1991, University of Oregon.

Christine M. Schalow, 1991

Associate Professor of Accounting and Finance

B.S. 1985, University of Wisconsin; M.S. 1987, St. Cloud State University; Ph.D. 1992, University of Arkansas.

David L. Schalow, 1991

Associate Professor of Accounting and Finance

B.B.A. 1976, M.B.A. 1978, University of Wisconsin-Madison; Ph.D. 1984, University of Arkansas.

Ed Schneiderhan, 1980

Counselor, Counseling Center

B.A. 1972, Sonoma State University; M.S. 1976, California State University, Long Beach.

Kent M. Schofield, 1966

Professor of History

B.A. 1961, University of California, Riverside; M.A. 1962, Claremont Graduate School; Ph.D. 1966, University of California, Riverside.

Kathleen E. Schroeder, 1991

Lecturer in Natural Science

B.A. 1985, M.A. 1987, California State University, San Bernardino.

- Peter R. Schroeder, 1967
Professor of English
A.B. 1962, Stanford University; M.A. 1963, Ph.D. 1967, Harvard University.
- Mary A. Schultz, 1986
Assistant Professor of Nursing
B.S. 1979, University of Cincinnati; M.S.N. 1984, Case Western Reserve.
- John A. Scribner, 1978
Associate Professor of Accounting and Finance
B.S. 1973, M.B.A. 1974, University of California, Riverside.
- Dale K. Sechrest, 1990
Professor of Criminal Justice
B.A. 1964, M.A. 1966, San Jose State University; D.Crim. 1974, University of California, Berkeley.
- Victoria A. Seitz, 1991
Associate Professor of Marketing
B.S. 1978, Kansas State University; M.S. 1984, Ph.D. 1987, Oklahoma State University.
- Robert A. Senour, 1970
Professor of Education
B.A. 1957, Ohio State University; M.Ed. 1966, Ph.D. 1970, Wayne State University.
- Vikram Sethi, 1994
Associate Professor of Information and Decision Sciences
B.E. 1984, Thapar Institute of Engineering, India; M.B.A. 1988, Wright State University; Ph.D. 1993, University of Pittsburgh.
- Hossein Shalchi, 1989
Professor of Accounting and Finance
B.S. 1969, Tehran University; M.B.A. 1975, University of Southern California; Ph.D. 1981, University of Illinois.
- Lisa Shamansky, 1989
Assistant Professor of Chemistry
B.S. 1980, Indiana University, Bloomington; Ph.D. 1986, University of Illinois, Urbana.
- Conrad Shayo, 1994
Assistant Professor of Information and Decision Sciences
B. of Commerce 1981, University of Dar-Es-Salaam, Tanzania; M.B.A. 1985, University of Nairobi, Kenya.
- David Shichor, 1976
Professor of Criminal Justice
B.A. 1962, Hebrew University, Jerusalem; M.A. 1966, California State University, Los Angeles; Ph.D. 1970, University of Southern California.
- Kenneth S. Shultz, 1992
Assistant Professor of Psychology
B.A. 1984, State University of New York, College at Potsdam; M.A. 1987, Ph.D. 1992, Wayne State University.
- Rodney Simard, 1986
Associate Professor of English
B.A. 1974, Memphis State University; M.A. 1976, Mississippi State University; Ph.D. 1982, University of Alabama.
- A. I. Clifford Singh, 1984
Professor of Physical Education
B.S. 1973, M.S. 1974, Western Illinois University; Ph.D. 1977, University of Colorado.
- Barbara Sirotnik, 1980
Professor of Information and Decision Sciences
A.B., B.S. 1973, M.S. 1979, Ph.D. 1980, University of California, Riverside.
- Mary J. Skillings, 1990
Assistant Professor of Education
B.S. 1978, Ohio University; M.A. 1984, Ph.D. 1990, Ohio State University.
- Mary F. Smith, 1987
Professor of Marketing
B.S. 1971, M.A. 1973, Oklahoma State University; M.B.A. 1981, Ph.D. 1988, University of Texas, Arlington.
- Wendy Smith, 1989
Assistant Professor of English
B.A. 1973, M.A. 1978, San Francisco State University; Ph.D. 1990, University of California, Los Angeles.
- Sue A. Spitzer, 1992
Lecturer in Education
B.A. 1971, University of California, Irvine; M.A. 1977, University of California, Los Angeles; M.A. 1989, University of California, Riverside.
- Geraldine B. Stahly, 1988
Associate Professor of Psychology
A.B. 1972, California State University, Long Beach; M.A. 1976, Ph.D. 1983, University of California, Riverside.
- Brett J. Stanley, 1994
Assistant Professor of Chemistry
B.S. 1987, University of Pittsburgh; Ph.D. 1992, Utah State University.
- Charles S. Stanton, 1987
Associate Professor of Mathematics
A.B. 1977, University of California, Berkeley; M.A. 1980, Ph.D. 1982, University of Wisconsin, Madison.
- Joel A. Stein, 1991
Associate Professor of Mathematics
B.S. 1966, M.S. 1968, Rensselaer Polytechnic Institute; Ph.D. 1980, Harvard University.
- Robert G. Stein, 1967
Professor of Mathematics
B.A. 1961, Harvard College; M.A.T. 1962, Wesleyan University; M.A. 1967, Dartmouth College; Ph.D. 1975, University of Texas.
- Walter T. Stewart, Jr., 1984
Professor of Information and Decision Sciences
B.A. 1976, M.A. 1979, Brigham Young University; Ph.D. 1984, Ohio University.
- David O. Stine, 1988
Professor of Education
B.A. 1958, San Diego State University; M.A. 1964, California State University, Los Angeles; Ed.D. 1980, Northern Arizona University.
- Darleen K. Stoner, 1984
Professor of Education
B.A. 1967, Washington State University; M.S. 1972, California State Polytechnic University, Pomona; Ph.D. 1981, Claremont Graduate School.

- Marilyn Stoner, 1993
Lecturer in Nursing
B.S.N. 1989, M.S.N. 1993, California State University, Dominguez Hills.
- Stuart S. Sumida, 1992
Assistant Professor of Biology
B.A. 1981, M.A. 1983, Ph.D. 1987, University of California, Los Angeles.
- Stanley L. Swartz, 1989
Professor of Education
A.B. 1970, Findlay College; M.Ed. 1972, Ph.D. 1976, Bowling Green State University.
- Dwight P. Sweeney, 1990
Associate Professor of Education
A.B. 1970, University of Notre Dame; M.A. 1971, Ph.D. 1981, University of Michigan.
- Eleonora Sztaray, 1993
Lecturer in Education
B.A. 1957, Beaver College, PA; M.A. 1984, California State University, San Bernardino.
- Dolores Tanno, 1989
Associate Professor of Communication Studies
B.A. 1983, M.A. 1985, California State University, Fullerton; Ph.D. 1990, University of Southern California.
- John Tate, 1989
Assistant Professor of Chemistry
B.Sc. 1979, Ph.D. 1982, University of Sheffield, England.
- Phillip A. Taylor, 1988
Professor of Political Science
B.A. 1967, Eckerd College; M.A. 1973, Ph.D. 1977, University of Oklahoma.
- Mary Texeira, 1994
Assistant Professor of Sociology
B.A. 1989, M.A. 1992, Ph.D. 1994, University of California, Riverside.
- Edward C. Teyber, 1979
Professor of Psychology
B.A. 1972, University of California, Los Angeles; M.A. 1974, Ph.D. 1977, Michigan State University.
- Jeffrey M. Thompson, 1988
Associate Professor of Biology
B.S. 1972, Michigan State University; Ph.D. 1976, Florida State University.
- Kenneth J. Thygeson, 1990
Professor of Accounting and Finance
B.A. 1967, Ph.D. 1973, Northwestern University.
- John Tibbals, 1968
Librarian
B.A. 1965, University of California, Santa Barbara; M.S.L.S. 1966, University of Southern California.
- Thomas C. Timmreck, 1985
Professor of Health Science and Human Ecology
B.S. 1971, Brigham Young University; M.Ed. 1972, Oregon State University; M.A. 1981, Northern Arizona University; Ph.D. 1976, University of Utah.
- Javier Torner, 1985
Associate Professor of Physics
B.S. 1978, J.P.M. Mexico; M.S. 1972, Ph.D. 1985, Illinois Institute of Technology.
- Mayo C. Toruno, 1983
Associate Professor of Economics; Chair, Department of Economics
B.A. 1974, B.A. 1975, M.A. 1976, California State University, Los Angeles; M.A. 1979, Ph.D. 1983, University of California, Riverside.
- Arthur J. Townley, 1990
Associate Professor of Education
B.A. 1958, M.A. 1963, California State University, Los Angeles; Ed.D. 1970, University of Southern California.
- Rolland Trapp, 1994
Assistant Professor of Mathematics
B.A. 1984, Knox College; M.A. 1985, Ph.D. 1990, Columbia University.
- Michael Trubnick, 1982
Associate Professor of Accounting and Finance
B.S.B.A. 1969, Northern Illinois University; M.B.A. 1980, DePaul University.
- Joseph Turpin, 1989
Professor of Education
A.B. 1965, M.S. 1967, Indiana University; Ph.D. 1986, University of Wisconsin.
- Timothy D. Usher, 1990
Assistant Professor of Physics
B.S. 1981, Appalachian State University; Ph.D. 1990, University of South Carolina.
- Elsa O. Valdez, 1993
Assistant Professor of Sociology
B.A. 1986, M.A. 1988, Ph.D. 1991, University of California, Riverside.
- Javad Varzandeh, 1987
Professor of Information and Decision Sciences
B.S. 1974, National University, Iran; M.S. 1976, St. Mary's University; Ph.D. 1981, Oklahoma State University.
- Mohamad T. Vaziri, 1986
Professor of Accounting and Finance
B.S. 1972, Pennsylvania State University—Pahlavi; M.B.A. 1974, Central State University; Ph.D. 1979, University of Oklahoma.
- Belisario Ventura, 1989
Associate Professor of Mathematics
Licen. 1976, University of del Valle, Guatemala; M.A. 1978, Ph.D. 1984, University of California, Berkeley.
- J. Paul Vicknair, 1982
Professor of Mathematics; Chair, Department of Mathematics
B.S. 1974, M.S. 1978, Ph.D. 1982, Louisiana State University.
- Kerstin Voight, 1994
Assistant Professor of Computer Science
Vordiplom 1981, Johann-Wolfgang-Goethe University of Frankfurt, Germany; M.S. 1984, Ph.D. 1994, Rutgers University.
- Steven R. Wagner, 1974
Associate Professor of Education
B.A. 1964, San Jose State University; M.A. 1968, San Fernando Valley State College; Ph.D. 1973, Claremont Graduate School.

- Carl P. Wagoner, 1969
Professor of Criminal Justice
B.S. 1960, Ball State University; M.A. 1964, Ph.D. 1971, Indiana University.
- Ching-Hua Wang, 1990
Associate Professor of Biology
M.D. 1978, Beijing Medical College; Ph.D. 1986, Cornell University.
- William Warehall, 1973
Professor of Art
B.F.A. 1968, Wayne State University; M.F.A. 1971, University of Wisconsin.
- Patrick Watkins, 1994
Professor of Theatre Arts; Chair, Department of Theatre Arts
B.A. 1971, Hunter College; M.F.A. 1985, University of California, Los Angeles.
- James Watts, 1989
Associate Professor of Public Administration
B.A. 1970, University of South Carolina; M.U.A. 1976, Virginia Poly. Institute and State University; J.D. 1980, Emory University; Ph.D. 1990, Vanderbilt University.
- Kathryn Z. Weed, 1990
Assistant Professor of Education
A.B. 1967, University of Redlands; M.A. 1977, Georgetown University.
- Michael G. Weiss, 1982
Associate Professor of Psychology
B.A. 1974, University of California, San Diego; M.S. 1978, University of Southern California; Ph.D. 1983, University of Florida.
- L. Curtis Westbrook, Jr., 1989
Associate Professor of Accounting and Finance
B.S. 1960, M.Acc. 1963, Florida State University; Ph.D. 1992, The University of Georgia.
- Daniel S. Whitaker, 1985
Professor of Spanish
B.A. 1971, Wake Forest University; M.A. 1973, Ph.D. 1985, University of Wisconsin.
- Edward M. White, 1965
Professor of English
B.A. 1955, New York University; M.A. 1956, Ph.D. 1960, Harvard University.
- Dudley J. Wiest, 1993
Associate Professor of Education
B.S. 1979, Concordia College; M.A. 1983, California State University, Northridge; Ph.D. 1992 Claremont Graduate School.
- Franklin P. Williams III, 1988
Professor of Criminal Justice.
B.S. 1968, M.S. 1973, Ph.D. 1976, Florida State University.
- Peter D. Williams, 1983
Professor of Mathematics
B.S. 1979, Ph.D. 1983, University of St. Andrews, Scotland.
- Robert D. Wilson, 1990
Associate Professor of Information and Decision Sciences
B.A. 1970, California State University, San Bernardino; M.B.A. 1971, Ph.D. 1975, University of California, Riverside.
- Ruth C. Wilson, 1971
Professor of Biology
B.A. 1961, M.A. 1964, California State College, Los Angeles; Ph.D. 1971, Claremont Graduate School.
- Kathleen M. Winston, 1991
Associate Professor of Nursing
B.S.N. 1974, University of Nevada, Las Vegas; M.S.N. 1979, University of San Diego.
- Janet J. Woerner, 1991
Associate Professor of Education
B.A. 1965, University of Kansas; M.A. 1971, Texas A & M; Ph.D. 1984, University of Kansas.
- Alvin Wolf, 1975
Professor of Education; Acting Chair, Department of Secondary and Vocational Education
B.S. 1957, M.A. 1964, University of San Francisco; Ph.D. 1972, University of California, Berkeley.
- Aurora Wolfgang, 1992
Assistant Professor of French
B.A. 1984, University of California, Santa Cruz; M.A. 1986, Ph.D. 1993, New York University.
- Eugene H. Wong, 1994
Lecturer in Psychology
B.A. 1986, University of California, Los Angeles; M.A. 1989, Ph.D. 1991, University of California, Riverside.
- Don Woodford, 1972
Professor of Art
B.A. 1963, Cornell College; M.A. 1964, Illinois State University; M.F.A. 1965, University of Wisconsin.
- Joanna S. Worthley, 1988
Assistant Professor of Psychology
B.A. 1967, Marietta College; M.S. 1977, Springfield College; Ph.D. 1987, Claremont Graduate School.
- Clifford Young, 1989
Professor of Public Administration; Chair, Department of Public Administration
B.A. 1969, California Baptist College; M.P.A. 1988, D.P.A. 1988, University of Southern California.
- Salaam Y. Yousif, 1991
Assistant Professor of English
B.A. 1969, University of Baghdad; M.A. 1980, Oklahoma State University; Ph.D. 1988, University of Iowa.
- Tong L. Yu, 1986
Associate Professor of Computer Science
B.S. 1977, Chinese University of Hong Kong; M.S.E. 1982, Ph.D. 1986, Johns Hopkins University.
- Kay Zemoudeh, 1990
Assistant Professor of Computer Science
B.S. 1981, M.S. 1984, University of Southwestern Louisiana; Ph.D. 1990, University of South Carolina.
- Scot J. Zentner, 1993
Assistant Professor Political Science
B.A. 1988, California State University, San Bernardino; M.A. 1991, Ph.D. 1994, Michigan State University.

Theodore H. Zimmerman, 1994
Lecturer in Education
 B.A. 1954, M.A. 1962, California State University, Long Beach;
 Ed.D. 1978, University of Southern California.

Jenny Zorn, 1989
Assistant Professor of Geography
 B.A. 1980, Flagler College; M.A. 1982, Ph.D. 1990, Ohio State
 University.

Emeritus Faculty

Richard T. Ackley
Professor of Political Science, Emeritus, 1990

Joe Bas
Professor of Spanish, Emeritus, 1992

Marty Bloomberg
Librarian, Emeritus, 1994

Vivien Bull
Professor of French, Emeritus, 1991

James D. Crum
Dean, School of Natural Sciences, Emeritus, 1992

G. Keith Dolan
Professor of Education, Emeritus, 1991

Robert G. Fisk
Professor of Education, Emeritus, 1973

Ernest Garcia
Professor of Education, Emeritus, 1990

Margaret K. Gibbs
Professor of Administration, Emeritus, 1980

Carol F. Goss
Professor of Political Science, Emeritus, 1988

John E. Hafstrom
Professor of Mathematics, Emeritus, 1979

Arlo D. Harris
Professor of Chemistry, Emeritus, 1988

Dalton Harrington
Professor of Biology, Emeritus, 1994

Robert R. Harrison
Professor of Art, Emeritus, 1972

Charles V. Hartung
Associate Professor of English, Emeritus, 1977

Melvin G. Hawkins
Professor of Social Work, Emeritus, 1992

Philip L. Herold
Associate Professor of Psychology, Emeritus, 1992

H. Arthur Hoverland
Professor of Accounting and Finance, Emeritus, 1992

Harold A. Jambor
Lecturer in Sociology, Emeritus, 1980

Dorothy Johnson
Professor of Nursing, Emeritus, 1983

Paul J. Johnson
Professor of Philosophy, Emeritus, 1994

Lee H. Kalbus
Professor of Chemistry, Emeritus, 1994

Charles F. Kellers
Professor of Physics, Emeritus, 1988

Nikolai E. Khokhlov
Professor of Psychology, Emeritus, 1992

Helene W. Koon
Professor of English, Emeritus, 1990

Nathan Kravetz
Professor of Education, Emeritus, 1985

Robert A. Lee
Professor of English, Emeritus, 1992

Mary L. McGregor
Associate Professor of Nursing, Emeritus, 1992

Sarojam Mankau
Professor of Biology, Emeritus, 1994

Kenton L. Monroe
Professor of Psychology, Emeritus, 1988

Bernhardt L. Mortensen
Associate Professor of Sociology, Emeritus, 1978

Art Nelson
Librarian, Emeritus, 1991

C. Michael O'Gara
Professor of Physical Education, Emeritus, 1977

Mary G. Patterson
Professor of Nursing, Emeritus, 1985

Clifford T. Paynton
Professor of Sociology, Emeritus, 1992

Ralph Petrucci
Professor of Chemistry, Emeritus, 1990

John M. Pfau
Professor of History, President, Emeritus, 1982

Mireille G. Rydell
Professor of French, Emeritus, 1988

Richard Saylor
Professor of Music, Emeritus, 1991

Gerald Scherba
Professor of Biology, Emeritus, 1991

William L. Slout
Professor of Theatre Arts, Emeritus, 1992

Robert A. Smith
Professor of History, Emeritus, 1982

Alexander Sokoloff
Professor of Biology, Emeritus, 1990

Gordon E. Stanton
Professor of Education, Emeritus, 1988

Helena V. Stanton
Associate Professor of Education, Emeritus, 1990

P. Richard Switzer
Professor of French, Emeritus, 1993

James D. Thomas
Professor of Political Science, Emeritus, 1990

Joseph K. Thomas
Vice President for Administration, Emeritus, 1982

Elton N. Thompson
Professor of Education, Emeritus, 1983

Del LaVerne Watson
Professor of Nursing, Emeritus, 1989

Robert L. West
Professor of Education, Emeritus, 1980

Donna M. Ziebarth, 1977
Associate Professor of Nursing, Emeritus, 1994

Special Appointments

Bruce Anderson, 1993
Studio Music Instructor
B.M. 1972, M.M. 1978, University of Redlands.

David Beatty, 1992
Studio Music Instructor
B.M. 1978, California State University, Northridge.

Phyllis Benson, 1970
Studio Music Instructor
B.M. 1951, Wheaton College.

Jean Bostley, 1994
Studio Music Instructor

Andy Cleaves, 1993
Studio Music Instructor

Dennis Dockstader, 1978
Studio Music Instructor
B.A. 1973, California State College, San Bernardino.

Lester Dropkin, 1994
Studio Music Instructor
B.M. 1975, University of Southern California.

Sandra Fenton, 1983
Studio Music Instructor
B.A. 1976, Pomona College.

John Gates, 1989
Studio Music Instructor
A.R.C.M. 1968, Royal College of Music, London.

Herbert Iverson, 1976
Studio Music Instructor
B.M. 1958, M.M. 1961, University of Redlands.

Paul L. Kardos, 1984
Studio Music Instructor
B.S. 1969, M.Ed. 1972, University of Nevada.

Gordon Lazarus, 1990
Studio Music Instructor
B.M. 1978, M.A. 1980, California State University, Northridge;
D.M.A. 1985, University of Southern California.

Catherine Graff MacLaughlin, 1976
Studio Music Instructor
B.A. 1962, University of California, Berkeley.

Michael Mack, 1990
Studio Music Instructor
B.A. 1990, University of Redlands.

David Moody, 1993
Studio Music Instructor
B.A. 1984, California State.

Charles Richard, 1992
Studio Music Instructor
B.A. 1985, M.A. 1986, California State University, Los Angeles.

Robert Scarano, 1991
Studio Music Instructor
B.A. 1987, University of California, Riverside.

Victoria Shapiro, 1967
Studio Music Instructor
Diploma 1947, B.S. in Viola 1949, Juilliard School of Music.

Armen Turadian, 1977
Studio Music Instructor
B.M. 1949, Oberlin College; M.M. 1951, University of Southern California.

Scott Vance, 1990
Studio Music Instructor
B.M. 1975, M.M. 1981, University of Redlands.

Appendix

Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from Ted Krug, director of financial aid, Room 141, University Hall, phone 880-5220:

1. Student financial assistance programs available to students who enroll at California State University, San Bernardino;
2. The method by which such assistance is distributed among recipients who enroll at California State University, San Bernardino;
3. The means, including forms, by which application for student financial assistance is made; the requirements for accurately preparing such applications;
4. The rights and responsibilities of students receiving financial assistance; and
5. The standards the student must maintain to be considered to be making satisfactory progress for the purpose of establishing and maintaining eligibility for financial assistance.

The following information concerning the cost of attending California State University, San Bernardino is available from Ted Krug, director of financial aid, Room 141, University Hall, phone 880-5220:

1. Fees and tuition (where applicable);
2. Estimated costs of books and supplies;
3. Estimates of typical student room and board costs and typical commuting costs; and
4. Any additional costs of the program in which the student is enrolled or expresses a specific interest.

Information concerning the refund policy of California State University, San Bernardino for the return of unearned tuition and fees or other refundable portions of costs is available from the Office of Student Accounts, Sierra Hall, Room 119, phone 880-5162.

Information concerning California State University, San Bernardino's policies regarding any refund due to the federal Title IV student assistance programs as required by the regulations is available from Ted Krug, director of financial aid, Room 141, University Hall, 880-5220.

Information concerning the academic programs of California State University, San Bernardino may be obtained from Dr. Jerrold E. Pritchard, associate vice president, academic programs, Room 101, Administration Building, phone 880-5024. This information may include:

1. The current degree programs and other educational and training programs;
2. The instructional, laboratory and other physical plant facilities which relate to the academic program;
3. The faculty and other instructional personnel;
4. Data regarding student retention at California State University, San Bernardino and, if available, the number and percentage of students completing the program in which the student is enrolled or has expressed interest; and
5. The names of associations, agencies, or governmental bodies which accredit, approve, or license the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the

institution's accreditation, approval, or licensing.

Information regarding special facilities and services available to handicapped students may be obtained from Dr. Terry Rizzo, acting director of Services to Students with Disabilities, Room 235, University Hall, phone 880-5238.

Determination of Residence for Nonresident Tuition Purposes

The Admissions and Records Office determines the residence status of all new and returning students for nonresident tuition purposes. Responses to the Application for Admission and, if necessary, other evidence furnished by the student are used in making this determination. A student who fails to submit adequate information to establish a right to classification as a California resident will be classified as a nonresident.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University is found in California Education Code Sections 68000-68090, 68121, 68123, 68124 and 89705-89707.5, and in Title 5 of the California Code of Regulations, Sections 41900-41912. A copy of the statutes and regulations is available for inspection at the Admissions and Records Office.

Legal residence may be established by an adult who is physically present in the state and who, at the same time, intends to make California his or her permanent home. Steps must be taken at least one year prior to the residence determination date to show an intent to make California the permanent home with concurrent relinquishment of the prior legal residence. The steps necessary to show California residency intent will vary from case to case. Included among the steps may be registering to vote and voting in elections in California; filing resident California state income tax forms on total income; ownership of residential property or continuous occupancy or renting of an apartment on a lease basis where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; maintaining California vehicle plates and operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service.

The student who is within the state for educational purposes only does not gain the status of resident regardless of the length of the student's stay in California.

In general, an unmarried minor (a person under 18 years of age) derives legal residence from the parent with whom the minor maintains or last maintained his or her place of abode. The residence of an unmarried minor who has a parent living cannot be changed by the minor's own act, by the appointment of a legal guardian or by the relinquishment of a parent's right of control.

A married person may establish his or her residence, independent of his or her spouse.

An international student may establish his or her residence, unless precluded by the Immigration and Nationality

Act from establishing domicile in the United States. An unmarried minor international student derives his or her residence from the parent with whom the minor maintains or last maintained his or her place of abode.

Nonresident students seeking reclassification are required by law to complete a supplemental questionnaire concerning financial independence.

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a "resident student" for tuition purposes. A residence determination date is set for each academic term and is the date from which residence is determined for that term.

Residence determination dates are:

<u>Quarter</u>	<u>Determination Date</u>
Fall	September 20
Winter	January 5
Spring	April 1
Summer	July 1

Questions regarding residence determination dates should be directed to the Admissions and Records Office which can give the residence determination date for the term for which the student is registering.

There are exceptions for nonresident tuition, including:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student who remained was still a minor. When the minor reaches age 18, the exception continues for one year to enable the student to qualify as a resident student.
2. Minors who have been present in California with the intent of acquiring residence for more than a year before the residence determination date and entirely self-supporting for that period of time.
3. Persons below the age of 19 who have lived with and have been under the continuous direct care and control of an adult or adults, not a parent, for the two years immediately preceding the residence determination date. Such adult must have been a California resident for the most recent year.
4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. The exception, once attained, is not affected by retirement or transfer of the military person outside the state.
5. Military personnel in active service stationed in California on the residence determination date for purposes other than education at state-supported institutions of higher education. Effective January 1, 1994, this exception continues until the military personnel has resided in the state the minimum time necessary to become a resident.
6. Dependent children of a parent who has been a California resident for the most recent year. This exception continues until the student has resided in the state the minimum time necessary to become a resident, so long as continuous residence is maintained at an institution.
7. Graduates of any school located in California that is operated by the United States Bureau of Indian Affairs, including, but not limited to, the Sherman Indian High School. The exception continues so long as continuous

- attendance is maintained by the student at an institution.
8. Certain credentialed, full-time employees of California school districts.
 9. Full-time state university employees and their children and spouses. State employees assigned to work outside the state and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.
 10. Certain exchange students.
 11. Children of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of law enforcement or fire suppression duties.

Any student, following a final campus decision on his or her residence classification only, may make written appeal to: The California State University, Office of General Counsel, 400 Golden Shore, Long Beach, CA 90802-4275, within 120 calendar days of notification of the final decision on campus of the classification. The Office of General Counsel may make a decision on the issue, or it may send the matter back to the campus for further review. Students classified incorrectly as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is subject to discipline pursuant to Section 41301 of Title 5 of the California Code of Regulations. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Admissions and Records Office. Applications for a change in classification with respect to a previous term are not accepted.

The student is cautioned that this summation of rules regarding residency determination is by no means a complete explanation of their meaning. The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes and in the regulations between the time this catalog is published and the relevant residence determination date.

Privacy Rights of Students in Education Records

The federal Family Education Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (34 C.F.R. 99) and California Education Code Section 67100 et seq., set out requirements designed to protect the privacy of students concerning their records maintained by the campus. Specifically, the statute and regulations govern access to student's records maintained by the campus, and the release of such records. In brief, the law provides that the campus must provide students access to records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate. The right to a hearing under the law does not include any right to challenge the appropriateness of a grade as determined by the instructor. The law generally requires that written consent of the student be received before releasing personally identifiable

data about the student from records to other than a specified list of exceptions. The institution has adopted a set of policies and procedures concerning implementation of the statutes and the regulations on the campus. Copies of these policies and procedures may be obtained at the office of the vice president for student services. Among the types of information included in the campus statement of policies and procedures are: 1) the types of student records and the information contained therein; 2) the official responsible for the maintenance of each type of record; 3) the location of access lists which indicate persons requesting or receiving information from the record; 4) policies for reviewing and expunging records; 5) the access rights of students; 6) the procedures for challenging the content of student records; 7) the cost which will be charged for reproducing copies of records, and 8) the right of the student to file a complaint with the Department of Education. An office and review board have been established by the Department to investigate and adjudicate violations and complaints. The office designated for this purpose is: The Family Educational Rights and Privacy Act Office (FERPA), U.S. Department of Education, 330 C St., Room 4511, Washington, D.C. 20202.

The campus is authorized under the act to release "directory information" concerning students. Directory information includes the student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. The above designated information is subject to release by the campus at any time unless the campus has received prior written objection from the student specifying information which the student requests not to be released. Written objections should be sent to the office of the vice president for student services.

The campus is authorized to provide access to student records to campus officials and employees who have legitimate educational interests in such access. These persons are those who have responsibilities in connection with the campus' academic, administrative or service functions and who have reason for using student records connected with their campus or other related academic responsibilities.

Disclosure may also be made to other persons or organizations under certain conditions (e.g. as part of accreditation or program evaluation; in response to a court order or subpoena; in connection with financial aid; or to other institutions to which the student is transferring).

Career Placement

The Career Development Center may furnish, upon request, information about the employment of students who graduate from programs or courses of study preparing students for a particular career field. This information includes data concerning the average starting salary and the percentage of previously enrolled students who obtained employment. The information may include data collected from either graduates of the campus or graduates of all campuses in The California State University.

Eligibility Index Tables

As of October 1989, ACT is introducing the Enhanced ACT Assessment (ACTE). The new ACT score scales for students testing October 1989 through March 1995 is below. For those students who took the ACT prior to October 1989, deduct 2 points from the chart for required composite score. (i.e. a gpa of 2.30 shows 24 as required. Those taking the ACT prior to October 1989 will need 22.)

Eligibility Index Table for California High School Graduates or Residents of California														
GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score
3.00 and above														
qualifies with any score			2.79	14	570	2.58	18	740	2.37	22	910	2.16	27	1080
2.99	10	410	2.78	14	580	2.57	18	750	2.36	23	920	2.15	27	1080
2.98	10	420	2.77	14	590	2.56	19	760	2.35	23	920	2.14	27	1090
2.97	10	430	2.76	15	600	2.55	19	760	2.34	23	930	2.13	27	1100
2.96	11	440	2.75	15	600	2.54	19	770	2.33	23	940	2.12	27	1110
2.95	11	440	2.74	15	610	2.53	19	780	2.32	23	950	2.11	28	1120
2.94	11	450	2.73	15	620	2.52	19	790	2.31	24	960	2.10	28	1120
2.93	11	460	2.72	15	630	2.51	20	800	2.30	24	960	2.09	28	1130
2.92	11	470	2.71	16	640	2.50	20	800	2.29	24	970	2.08	28	1140
2.91	12	480	2.70	16	640	2.49	20	810	2.28	24	980	2.07	28	1150
2.90	12	480	2.69	16	650	2.48	20	820	2.27	24	990	2.06	29	1160
2.89	12	490	2.68	16	660	2.47	20	830	2.26	25	1000	2.05	29	1160
2.88	12	500	2.67	16	670	2.46	21	840	2.25	25	1000	2.04	29	1170
2.87	12	510	2.66	17	680	2.45	21	840	2.24	25	1010	2.03	29	1180
2.86	13	520	2.65	17	680	2.44	21	850	2.23	25	1020	2.02	29	1190
2.85	13	520	2.64	17	690	2.43	21	860	2.22	25	1030	2.01	30	1200
2.84	13	530	2.63	17	700	2.42	21	870	2.21	26	1040	2.00	30	1200
2.83	13	540	2.62	17	710	2.41	22	880	2.20	26	1040			
2.82	13	550	2.61	18	720	2.40	22	880	2.19	26	1050			
2.81	14	560	2.60	18	720	2.39	22	890	2.18	26	1060			
2.80	14	560	2.59	18	730	2.38	22	900	2.17	26	1070			

Below 2.00 does not
qualify for regular
admission.

The following table reflects the scores needed by students who took the Enhanced ACT Assessment April 1, 1995 or after.

Eligibility Index Table for California High School Graduates or Residents of California														
GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score
3.00 and above														
qualifies with any score			2.79	14	670	2.58	18	840	2.37	22	1010	2.16	27	1180
2.99	10	510	2.78	14	680	2.57	18	850	2.36	23	1020	2.15	27	1180
2.98	10	520	2.77	14	690	2.56	19	860	2.35	23	1020	2.14	27	1190
2.97	10	530	2.76	15	700	2.55	19	860	2.34	23	1030	2.13	27	1200
2.96	11	540	2.75	15	700	2.54	19	870	2.33	23	1040	2.12	27	1210
2.95	11	540	2.74	15	710	2.53	19	880	2.32	23	1050	2.11	28	1220
2.94	11	550	2.73	15	720	2.52	19	890	2.31	24	1060	2.10	28	1220
2.93	11	560	2.72	15	730	2.51	20	900	2.30	24	1060	2.09	28	1230
2.92	11	570	2.71	16	740	2.50	20	900	2.29	24	1070	2.08	28	1240
2.91	12	580	2.70	16	740	2.49	20	910	2.28	24	1080	2.07	28	1250
2.90	12	580	2.69	16	750	2.48	20	920	2.27	24	1090	2.06	29	1260
2.89	12	590	2.68	16	760	2.47	20	930	2.26	25	1100	2.05	29	1260
2.88	12	600	2.67	16	770	2.46	21	940	2.25	25	1100	2.04	29	1270
2.87	12	610	2.66	17	780	2.45	21	940	2.24	25	1110	2.03	29	1280
2.86	13	620	2.65	17	780	2.44	21	950	2.23	25	1120	2.02	29	1290
2.85	13	620	2.64	17	790	2.43	21	960	2.22	25	1130	2.01	30	1300
2.84	13	630	2.63	17	800	2.42	21	970	2.21	26	1140	2.00	30	1300
2.83	13	640	2.62	17	810	2.41	22	980	2.20	26	1140			
2.82	13	650	2.61	18	820	2.40	22	980	2.19	26	1150			
2.81	14	660	2.60	18	820	2.39	22	990	2.18	26	1160			
2.80	14	660	2.59	18	830	2.38	22	1000	2.17	26	1170			

Below 2.00 does not
qualify for regular
admission.

Eligibility Index

The eligibility index is the combination of the high school grade-point average and the score on either the American College Test (ACT) or the Scholastic Aptitude Test (SAT). For this purpose, the university computes the grade-point average on the final three years of high school studies, excluding physical education and military science, and uses bonus points for certain honors courses. CSU may offer early, provisional admission based on work completed through the junior year of high school and planned for the senior year.

Students may calculate the index by multiplying their grade-point average by 800 and adding their total score on the SAT. Or, if they took the ACT, multiply their grade-point average by 200 and add ten times the composite score from the ACT. California high school graduates (or legal residents of California for tuition purposes) need a minimum index of 2800 using the SAT or 694 using the ACT; the table below shows the combinations of test scores and averages required. Students who neither graduated from a California high school nor are a resident of California for tuition purposes need a minimum index of 3402 (SAT) or 842 or above (ACT).

Applicants with grade-point averages above 3.00 (3.61 for nonresidents) are exempt from the test requirements.

Student Discipline Code

Inappropriate conduct by students or applicants for admission is subject to discipline as provided in Sections 41301 through 41304 of Title 5, California Code of Regulations. These sections are as follows:

41301. Expulsion, Suspension and Probation of Students. Following procedures consonant with due process established pursuant to Section 41304, any student of a campus may be expelled, suspended, placed on probation or given a lesser sanction for one or more of the following causes which must be campus related:

- a. Cheating or plagiarism in connection with an academic program at a campus.
- b. Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus.
- c. Misrepresentation of oneself or of an organization to be an agent of a campus.
- d. Obstruction or disruption, on or off campus property, of the campus educational process, administrative process, or other campus function.
- e. Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his or her family or the threat of such physical abuse.
- f. Theft of, or non-accidental damage to, campus property, or property in the possession of, or owned by, a member of the campus community.
- g. Unauthorized entry into, unauthorized use of, or misuse of campus property.
- h. On campus property, the sale or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental

care, or when lawfully permitted for the purpose of research, instruction or analysis.

- i. Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a college campus function without prior authorization of the campus president.
- j. Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function.
- k. Abusive behavior directed toward, or hazing of, a member of the campus community.
- l. Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by publication in the campus newspaper, or by posting on an official bulletin board designated for this purpose, and which order is not inconsistent with any of the other provisions of this Section.
- m. Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section.
- n. For purposes of this Article, the following terms are defined:
 1. The term "member of the campus community" is defined as meaning California State University Trustees, academic, non-academic and administrative personnel, students, and other persons while such other persons are on campus property or at a campus function.
 2. The term "campus property" includes:
 - A. real or personal property in the possession of, or under the control of, the Board of Trustees of the California State University, and
 - B. all campus feeding, retail, or residence facilities whether operated by a campus or by a campus auxiliary organization.
 3. The term "deadly weapons" includes any instrument or weapon of the kind commonly known as a black-jack, sling shot, billy, sandclub, sandbag, metal knuckles, any dirk, dagger, switchblade knife, pistol, revolver, or any other firearm, any knife having a blade longer than five inches, any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club.
 4. The term "behavior" includes conduct and expression.
 5. The term "hazing" means any method of initiation into a student organization or any pastime or amusement engaged in with regard to such an organization which causes, or is likely to cause, bodily danger or physical or emotional harm to any member of the campus community; but the term "hazing" does not include customary athletic events or other similar contests or competitions.
- o. This Section is not adopted pursuant to Education Code Section 89031.
- p. Notwithstanding any amendment or repeal pursuant to the resolution by which any provision of this article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

41302. Campus Emergency; Disposition of fees; Interim Suspension. During periods of campus emergency, as determined by the President of the individual campus, the President may, after consultation with the Chancellor, place into immediate effect any emergency regulations, procedures, and other measures deemed necessary or appropriate to meet the emergency, safeguard persons and property, and maintain educational activities.

The President of the campus may place on probation, suspend, or expel a student for one or more of the causes enumerated in Section 41301. No fees or tuition paid by or for such students for the semester, quarter or summer session in which he or she is suspended or expelled shall be refunded. If the student is readmitted before the close of the semester, quarter, or summer session in which he or she is suspended, no additional tuition or fees shall be required of the student on account of the suspension.

The President may immediately impose an interim suspension in all cases in which there is reasonable cause to believe that such an immediate suspension is required in order to protect lives or property and to insure the maintenance of order. A student so placed on interim suspension shall be given prompt notice of charges and the opportunity for a hearing within 10 days of the imposition of interim suspension. During the period of interim suspension, the student shall not, without prior written permission of the President or designated representative, enter any campus of the California State University other than to attend the hearing. Violation of any condition of interim suspension shall be grounds for expulsion.

41303. Conduct by Applicants for Admission. Notwithstanding any provision in this Chapter 1 to the contrary, admission or readmission may be qualified or denied to any person who, while not enrolled as a student, commits acts which, were he enrolled as a student, would be the basis for disciplinary proceedings pursuant to Sections 41301 or 41302. Admission or readmission may be qualified or denied to any person who, while a student, commits acts which are subject to disciplinary action pursuant to Section 41301 or Section 41302. Qualified admission or denial of admission in such cases shall be determined under procedures adopted pursuant to Section 41304.

41304. Student Disciplinary Procedures for the California State University. The Chancellor shall prescribe, and may from time to time revise, a code of student disciplinary procedures for the California State University. Subject to other applicable law, this code shall provide for determinations of fact and sanctions to be applied for conduct which is a ground of discipline under Sections 41301 or 41302, and for qualified admission or denial of admission under Section 41303; the authority of the campus President in such matters; conduct related determinations of financial aid eligibility and termination; alternative kinds of proceedings, including proceedings conducted by a Hearing Officer; time limitations; notice; conduct of hearings, including provisions governing evidence, a record, and review; and such other related matters as may be appropriate. The Chancellor shall report to the Board actions taken under this section. The Code is administered by the coordinator of student conduct, 880-5185.

By action of the California State Legislature, Penal Code 502 has been amended by 502.1 (chapter 1076) to include computer-related crimes as a specific violation of the student conduct code. Therefore, the following is added as a violation of student conduct: Per Section 502 and 502.1 of the Penal Code, Chapter 1076, a student may be subject to disciplinary sanctions, as found in 41301-41304 of Title 5, for violation of student conduct for computer-related crimes delineated in the Code.

Drug-Free Schools and Communities Act Amendment of 1989

As required by the Drug-Free Schools and Communities Act Amendments of 1989, university standards of student conduct prohibit the unlawful possession, use, or distribution of illicit drugs and alcohol by students on university property or as part of any university activity.

Notwithstanding other penalties provided by local, state and federal law which prohibit the above activity, under Title 5, California Code of Regulations, 41301-41304, university disciplinary sanctions which may be imposed are expulsion, suspension, probation or lesser sanctions.

Studies on the effects of controlled substances have demonstrated that the use of such substances can lead to addiction, lung damage, heart damage, brain damage, unpredictable behavior, paranoia and other physical and mental disorders.

The Counseling Center can assist students in locating available drug or alcohol counseling, treatment or rehabilitation or re-entry programs. The Counseling Center is located in the Physical Sciences Building, Room 227, 880-5040.

Student Right-to-Know and Campus Security Act

The Student Right-to-Know and Campus Security Act, as amended by the Higher Education Technical amendments of 1991, Public Law 102-26 requires the university to provide the following information. The university produces and makes available graduation rates for all students and for those who receive athletically-related financial aid, and produces and makes available information on campus crime and security. Information on graduation rates for all students is available at the Office of Admissions and Records, information about graduation rates for those who receive athletically-related financial aid is available at the Office of the Vice President, University Relations, and information about crime rates and security is available at Public Safety. Information on all three areas may be available from the reference desk at the Pfau Library.

Summarizing the graduation rates for all students, by fall 1990, or six years after entering the CSU, 45.5 percent of the fall 1984 entering freshman class for the entire CSU system had earned the bachelor's degree, and in fall 1992 these systemwide rates, 35.8 percent of the fall 1984 Cal State, San Bernardino entering freshman class had earned the bachelor's degree, and in fall 1992, 44.2 percent had earned the degree.

Historical trends indicate the CSU systemwide graduation rate is expected eventually to reach 59.6 percent, and 45.7 percent for Cal State, San Bernardino. A graduation rate of nearly 60 percent is on a par with the best of peer state universities and colleges.

Refund of Fees

Details concerning fees which may be refunded, the circumstances under which fees may be refunded and the appropriate procedure to be followed in seeking refunds may be obtained by consulting Section 41803 (parking fees), 41913 (nonresident tuition), 42019 (housing charges) and 41802 (all other fees) of Title 5, California Code of Regulations. In all cases it is important to act quickly in applying for a refund. Information concerning any aspect of the refund of fees may be obtained from the Accounting Office.

Average Annual Cost of Education and Sources of Funds Per Full-Time Equivalent Student

The 21* campuses and the Chancellor's Office of The California State University are financed primarily through funding provided by the taxpayers of California. The total state appropriation to the CSU for 1994-95, including capital outlay funding in the amount of \$11,870,000** is \$1,565,020,000. However, the total cost of education for CSU, however, is \$2,183,470,000 which must provide support for a projected 250,000 full-time equivalent students (FTES). The number of full-time equivalent students is determined by dividing the total academic student load by 15 units per term (the figure used here to define a full-time student's academic load).

The total cost of education in the CSU is defined as the expenditures for current operations, including payments made to the students in the form of financial aid, and all fully reimbursed programs contained in state appropriations, but excluding capital outlay appropriations and lottery funds. *The average cost of education* is determined by dividing the total cost by the total FTES. The average cost is further differentiated into three categories: state support (the state appropriation, excluding capital outlay), student fee support, and support from other sources (including federal funds).

Thus, excluding costs which relate to capital outlay, the average cost of education per FTE student is \$8,734. Of this amount, the average student fee support per FTE is \$2,106. (The State University fee, application fee, and nonresident tuition are included in the average costs paid by the students;

55.8 percent had earned the degree. By comparison with individual students may pay less or more than \$2,106, depending on whether they are part-time, full-time, resident, or nonresident students.)

* Excluding California Maritime Academy, which becomes a CSU campus in July 1995.

**Does not include \$17,000,000 of special capital outlay bond funds for special repairs and deferred maintenance.

	Average Cost per		
	Amount	FTE Student	Percentage
Total cost of education	\$2,183,470,000	\$8,734	100.0%
State Appropriation	1,553,150,000	6,213	71.1%
Student fee support	526,521,000	2,106	24.1%
Support from other sources	103,799,000	415	4.8%

Procedure for Establishment or Abolishment of Student Body Fee

The law governing The California State University provides that a student body fee may be established by student referendum with the approval of two-thirds of those students voting. The student body fee was established at California State University, San Bernardino by student referendum on February 15, 1966. The same fee can be abolished by a similar two-thirds approval of students voting on a referendum called for by a petition signed by 10% of the regularly enrolled students (California Education Code, Section 89300). The level of the fee is set by the chancellor. An increase in the student body fee may be approved by the chancellor only following a referendum on the fee increase approved by a majority of students voting. Student body fees support a variety of cultural and recreational programs, child care centers and special student support programs.

Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this catalog, students and others who use this catalog should note that laws, rules and policies change from time to time and that these changes may alter the information contained in this publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University, by the chancellor or designee of The California State University, or by the president or designee of the institution. Further, it is not possible in a publication of this size to include all of the rules, policies and other information which pertain to the student, the institution and The California State University. More current or complete information may be obtained from the appropriate department, school or administrative office.

Nothing in this catalog shall be construed, operate as, or have the effect of an abridgement or a limitation of any rights, powers or privileges of the Board of Trustees of The California State University, the chancellor of The California State University or the president of the campus. The trustees, the chancellor and the president are authorized by law to adopt, amend or repeal rules and policies which apply to students. This catalog does not constitute a contract or the terms and conditions of a contract between the student and the institution or The California State University. The relationship of the student to the institution is one governed by statute, rules and policy adopted by the Legislature, the trustees, the chancellor, the president and their duly authorized designees.

Nondiscrimination Policy

The California State University does not discriminate on the basis of race, color, national origin, sex, physical disability or sexual orientation in the educational programs or activities it conducts.

Sex

The California State University is committed to providing equal opportunities to men and women CSU students in all campus programs, including intercollegiate athletics.

The California State University does not discriminate on the basis of sex in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of sex in education programs and activities operated by California State University, San Bernardino. Such programs and activities include admission of students and employment. Inquiries concerning the application of Title IX to programs and activities of California State University, San Bernardino may be referred to Dale T. West, personnel officer, or Dr. J. Cordell Robinson, associate vice president, academic personnel, the campus officers assigned the administrative responsibility of reviewing such matters or to the Regional Director of the Office of Civil Rights, Region 9, 50 UN Plaza, Room 239, San Francisco, CA 94102.

Disability

The California State University does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. Section 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (1990) and the regulations adopted thereunder prohibit such discrimination. Dr. J. Cordell Robinson, associate vice president, academic personnel, and Dr. Frank Rincón, vice president for student services, have been designated to coordinate the efforts of California State University, San Bernardino to comply with the Acts in their implementing regulations. Inquiries concerning compliance may be addressed to these persons at 5500 University Parkway, San Bernardino, CA 92407, (714) 880-5000.

Race, Color or National Origin

The California State University complies with the requirements of Title VI of the Civil Rights Act of 1964 and the regulations adopted thereunder. No person shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program of The California State University.

Sexual Harassment

It is the policy of California State University, San Bernardino to maintain a working and learning environment free from sexual harassment of its students, employees and those who apply for student and employee status. Questions regarding sexual harassment should be addressed to Dale T. West, personnel officer, or Dr. J. Cordell Robinson, associate vice president, academic personnel.

Age, Marital Status, Religion or Sexual Orientation

California State University, San Bernardino does not discriminate on the basis of age, marital status, religion or sexual orientation in employment, educational programs or activities it conducts, except as preempted by federal regulations.

INDEX

A

Absence, leave of 51, 324
 Academic
 advisement, new student 26
 course load 48, 321
 disqualification 54
 information sessions 47
 probation 53, 321
 probation, admission on 41
 regulations 47
 renewal 54
 Academic computing 21
 Academic program 17
 Academic schools 72
 Accelerated progress 48
 Access to records 55, 449
 Accounting 73, 78
 Accounting certificate 81
 Accounting, professional 332
 Accreditation 19
 Activities 27
 Adapted physical education credential 262, 365
 Adding classes 50, 322
 Administration, B.A., B.S. 75, 78
 Administration, M.B.A. 330
 Administration, M.P.A. 411
 Administrative computing 21
 Administrative drop policy 50
 Administrative officers 14
 Administrative services credentials 365
 Admission
 as a freshman 36
 as an adult 38
 as an auditor 40
 as an undergraduate transfer student 37
 from nonaccredited schools 325
 of foreign students 38, 319
 of former students 39
 of graduate students 319
 of graduate students from foreign universities 319
 of high school students 37
 of nonresident 41, 448
 of previously disqualified students 41
 procedures, graduate 319
 provisional 37, 321
 to summer session 41, 70
 to teaching credential program 40
 to the university 35
 Admissions requirements, undergraduates 35
 Adult (vocational) teaching credential 153
 Adult Re-Entry Center 28
 Adult students 38
 Advanced placement 40
 Advancement to candidacy 321
 Advising and academic services 26

Advisor, faculty 48
 Advisory board 13
 Aerospace studies 82
 Afternoon classes 21
 Air Force ROTC 82
 Alan Pattee scholarships 30, 44
 Alumni association 33
 American college tests (ACT) 38
 American culture and language program 70
 American studies, B.A. 84
 Anthropology 91
 Application
 acknowledgment 36
 filing dates 36
 procedures 35
 Applied gerontology certificate 292
 Applied music 245
 Art, B.A. 97
 Associated students, inc. 27
 Athletic training internship program 261
 Athletics 28
 Attendance 50
 Audiometrist certification 190
 Auditing courses 50

B

Baccalaureate degree programs 18
 Basic skills, mandatory 48
 Basic teaching credentials 138
 Beta Gamma Sigma 81, 332
 Bilingual/cross-cultural option, M.A. 350
 Bilingual/cross-cultural specialist credential 367
 Bilingual/cross-cultural studies: Spanish/English 297
 Biochemistry 113
 Biology, B.A., B.S. 106
 Biology, M.S. 326
 Board of trustees 8
 Bookstore 33
 Business administration, B.A., B.S. 75, 78
 Business Administration, M.B.A. 330
 Business economics 76
 Business skills for artist certificate program 101

C

Cafeteria (Commons) 33
 Calendar 4
 California articulation number (CAN) 39
 California state university (CSU) 7
 Campus police 32
 Campus tours 24
 Career development center 28
 Centers 22
 Certificate programs 66
 Challenge of courses 48
 Chancellor, office of 8
 Change in graduate program 323
 Change of major 55
 Changes in rules and policies 453
 Cheating (plagiarism) 54
 Chemistry, B.A., B.S. 112

Child development 201
 Children's center 33
 Children's theatre, certificate 304
 Class attendance regulations 50
 Class level 47
 Class schedule 50
 Class size 19
 Classified graduate standing 319
 Classified postbaccalaureate standing 319
 CLEP credit 40
 Coachella valley campus 19
 Coaching certificate 263
 College entrance examinations 38
 College preparatory subject requirements 37
 Commencement 63, 323
 Commons 33
 Communication, B.A. 117
 Communication skills certificate 119
 Community college counseling certificate 371
 Community college credits 37
 Community health education and promotion 186
 Community mental health certificate 188
 Comprehensive examinations 20, 48
 Computer science, B.S. 123
 Computer science, M.S. 338
 Computer systems and programming certificate 126
 Concurrent enrollment 39, 49, 323
 Conditionally classified graduate standing 319
 Conferences 70
 Constitution, U.S., requirement 61
 Continuing education (see extended education) 69
 Cooperative education 20
 Correspondence courses, credit for 40
 Costs, estimated 45, 453
 Costs, systemwide 453
 Council of graduate students 323
 Counseling, academic 48
 Counseling and guidance, M.S. 342
 Course credits 71
 Course loads 48, 321
 Course numbering system 71
 Creative writing, certificate 162
 Credential programs 138, 365
 Credit by examination 48, 52, 323
 Credit for comprehensive examinations 48
 Credit for extension or correspondence courses 40
 Credit for military service 40
 Credit, postbaccalaureate for seniors 55, 323
 Credit summary 39
 Credit, transfer of 39
 Credit/no credit policy 53
 Criminal justice, B.A. 128
 Criminal justice certificate program 129
 Criminal justice, M.A. 346
 Cross-registration with UCR 49
 Curriculum 71

D

Dance 132
 Dean's list 63
 Debts, students 45

Declaring major 55
 Degree completion programs for part-time students 21
 Degree programs offered 18
 Degree requirements, graduate 320
 Degree requirements, undergraduate 57
 Departmental honors 63
 Desert studies center 23
 Designated subjects teaching credential 159
 Determination of residency 41, 448
 Disabled student services 32
 Dismissal 54
 Disqualification, academic 54
 Disqualified students, readmission of 41
 Dormitories 27
 Drama (see theatre arts) 302
 Dropping classes 50
 Drug-free schools and communities act amendment of 452
 Dual major 63, 322
 Duplicate degree tuition 44

E

Economics, B.A. 133
 Education 137
 Education, M.A. 349
 Bilingual/cross-cultural option 350
 Educational counseling option 351
 Elementary education option 352
 Environmental education option 354
 Instructional technology option 356
 Middle grades option 357
 Reading/language arts option 358
 Secondary education 359
 Secondary option
 English specialization 360
 History specialization 360
 Physical education specialization 360
 Spanish specialization 360
 Special education option 362
 Teaching English as a second language option 363
 Vocational education option 364
 Education of gifted, certificate program 371
 Educational administration, M.A. 386
 Educational computing, certificate program 371
 Educational counseling, M.A. 351
 Educational opportunity program (EOP) 25
 Educational technology, certificate program 372
 Election of graduation requirements 55, 322
 Elementary education, M.A. 352
 Eligibility index 36, 451
 Emergencies (public safety) 32
 Engineering, pre- 64
 English, B.A. 160
 English composition, M.A. 389
 English equivalency examination 40
 English, M.A. option in secondary education 360
 English placement test (EPT) 62
 English subject requirement 37
 English translators, certificate programs 175, 184
 Enrollment at any other institution
 (see concurrent) 39, 49, 323
 Enrollment limitations 325

Entry level mathematics requirement (ELM) 62
 Environmental education, certificate program 372
 Environmental education, M.A. 354
 Environmental health science 186
 Environmental studies, B.A. 166
 Ethnic studies 168
 Evaluation of transcripts (see transfer of credit) 39
 Evening classes 21
 Examination, credit by 48, 323
 Examinations, final 52
 Expenses 43, 45
 Extended education 69
 Extension courses, credit for 40, 69

F

Facilities 20
 Faculty advisor 48
 Faculty, list of 429
 Faculty office hours 19
 Fee schedule 43
 Fees 43
 Filing dates 36
 Final examinations 52
 Final grade 52
 Finance 75, 78, 170, 330
 Financial aid 29, 447
 Financial aid, postbaccalaureate students 323
 Fitness management certificate 263
 Foods and nutrition, B.S. 172
 Foreign languages, department of 173
 Foreign student advisor 31
 Foreign students, admission of 38
 Former students, admission of 39
 Foundation of the university 23
 Fraternities 28
 French, B.A. 174
 French/English translators certificate 175
 Freshman orientation 28
 Freshman subject requirement 37
 Freshmen, admission of 36
 Full-term course defined 71, 321
 Full-time equivalency, graduates 321
 Full-time student course load 321

G

General education requirements 57
 Geography, B.A. 177
 Geology, B.S. 181
 German, minor 184
 German/English translators certificate 184
 Gerontology 201
 Gerontology certificate 292
 Gifted, certificate program 371
 Government requirement 61
 Grades 52
 Grades for withdrawal 50, 53
 Grading system 52
 Graduate
 admissions 319
 course load 321

degree programs 18, 317
 writing requirement 321
 Graduation requirement check 61, 322
 Graduation requirement, writing 61
 Graduation requirements 57, 320
 Graphic design 99
 Grievance procedures 52, 322

H

Hardship petitions 36
 Health administration and planning 186
 Health center 31
 Health insurance 32
 Health science, B.A. 186
 Health screening 38
 Health services administration, M.S. 393
 High school graduation equivalency 36
 High school preparation recommended 37
 High school-university program 37
 History, B.A. 194
 History, constitution and government requirement 61
 History, M.A. option in education 360
 Honors courses, high school advanced placement 40
 Honors program, university 19, 308
 Honors, university 63
 Housing 27
 Human development, B.A. 201
 Human services, B.A. 205
 Humanities 206

I

Immunizations 32
 Impacted programs 35
 Incomplete grade 52
 Information and decision sciences 208
 Information management 75, 78, 208, 330
 Inservice programs 70
 Institutes 22
 Instructional technology, M.A. 356
 Intensive learning experience (ILE) program 25
 Intercollegiate athletics 28
 Interdisciplinary studies 210
 Interdisciplinary studies, M.A. 396
 International business 78
 International programs 22
 International relations, certificate 273
 International students 31, 38
 Intramural sports 28

J

Junior (community) college credits transferable 37

L

Language development specialist certificate 372
 Late registration 50, 322
 Late-day classes 21
 Latin American studies certificate 93
 Law 64, 273
 Learning center 25

Learning handicapped, intern credential 370
 Leave of absence 51, 324
 Liberal studies, B.A. 211
 Library 20
 Loan funds 29
 London business program 23

M

Major fields of study 18
 Major fields of study, graduate 317
 Management 75, 223, 330
 Management and human resources 330
 Management science 75, 78, 225, 330
 Marketing 75, 78, 227
 Marketing management 330
 Master's degree
 biology 326
 business administration 330
 computer science 338
 counseling and guidance 342
 criminal justice 346
 education 349
 educational administration 386
 English composition 389
 health services administration 393
 interdisciplinary studies 396
 mathematics 398
 national security studies 401
 psychology 404
 public administration 411
 rehabilitation counseling 415
 science 418
 social sciences 420
 social work 422
 urban planning 427
 Master's degree requirements 320
 Mathematics, B.A. 229
 Mathematics, M.A. 398
 Mathematics requirement, entry level 62
 Measles and rubella immunizations, proof of 38
 Middle grade education, certificate 372
 Middle grade option, M.A. 357
 Military science 235
 Military science certificate 237
 Military service, credit 40
 Minors 64
 Multicultural Center 28
 Multiple majors/concentrations 63
 Multiple subjects credentials 138
 Museum studies certificate 93
 Music, B.A. 239
 Music education 239

N

National security studies, M.A. 401
 National student exchange program 23
 Natural sciences 248
 New student programs 28
 Nondiscrimination 454
 Nontraditional grading policy 53

Numbering system of courses 71
 Nursing, B.S. 250
 Nutrition (see foods and nutrition) 172

O

Off-campus programs 70
 Omicron Delta Epsilon 135
 Open university 70
 Orientation, new student 28
 Overloads 48, 321
 Overseas programs 22

P

Paralegal Option, B.A. in Criminal Justice 129
 Paralegal studies, certificate 254
 Paralegal studies, minor 254
 Parking fees 44
 Parking services 45
 Part-time students 21
 Pattee, Alan, scholarships 30, 44
 Performance (music) 247
 Phi Kappa Phi 19, 323
 Philosophy, B.A. 257
 Physical education, B.S. 261
 Physical education, M.A. option in education 360
 Physical education requirement 60, 264
 Physics, B.A., B.S. 268
 Pi Sigma Alpha 273
 Placement services 28
 Plagiarism (cheating) 54
 Policies, changes in 453
 Political economy, minor 134
 Political science, B.A. 272
 Postbaccalaureate admissions 319
 Postbaccalaureate credit for seniors 55, 323
 Pre-engineering 268
 Pre-law minor 64, 273
 Preprofessional programs
 Dentistry 64
 Medicine 64
 Pharmacy 64
 Pre-engineering 64
 Pre-law 64
 Veterinary medicine 64
 Privacy rights 449
 Probation 54
 Probation, admission on 41
 Production and operations management 330
 Production/operations management 75
 Professional accounting 330
 Professional administrative services credential 366
 Professional development contract programs 70
 Professional writing, certificate 162
 Project UPBEAT 31
 Provisional admission 37, 321
 Psychology, B.A. 277
 Psychology, M.A., M.S. 404
 Public administration 75, 282
 Public administration, M.P.A. 411
 Public safety (campus police) 32
 Pupil personnel services credential 367

Q

Quarter-hour credit comparisons 71

R

Reading recovery for teachers, certificate 373
 Reading/language arts for classroom, certificate 373
 Reading/language arts, M.A. 358
 Reading/language arts specialist credential 368
 Readmission of disqualified students 41, 321
 Recording arts, minor 241
 Records, access to 55, 449
 Recreation leadership certificate 263
 Recreational sports 28
 Refunds 44, 453
 Registration 50
 Registration, late 50, 322
 Rehabilitation counseling, certificate 373, 416
 Rehabilitation counseling, M.A. 415
 Remedial education in elementary school, certificate 373
 Repeat of courses 54, 323
 Requirements for baccalaureate degree 57
 Requirements for master's degree 320
 Residence, determination of 41, 448
 Residence halls 27
 Residence requirement for graduation 63
 Resource specialist in special education certificate 374
 Returning students 39
 ROTC 49
 Air Force 82
 Army 235
 Rules, changes in 453

S

SAIL program 26
 Satisfactory progress grade 53
 Scheduling of classes 21
 Scholarship standards for undergraduates 53
 Scholarships 29
 Scholastic aptitude test (SAT) 38
 School business management, certificate 373
 School health 186
 School psychologist services credential 369
 Science, M.A.T. 418
 Second bachelor's degree 63
 Second master's degree 322
 Secondary education, M.A. 359
 Semester-hour credit comparison 71
 Senior students, postbaccalaureate credit for 55, 323
 Services to students with disabilities 32
 Severely handicapped, intern credential 370
 Single subject teaching credentials 146
 Small business management 75
 Social sciences, B.A. 284
 Social sciences, M.A. 420
 Social security number 41
 Social work, certificate 292
 Social work, M.S.W. 422
 Sociology, B.A. 291

Sororities 28
 Spanish, B.A. 296
 Spanish for public speakers certificate 298
 Spanish, M.A. option in secondary education 360
 Special education, M.A. 362
 Special education specialist credential
 Mild to moderate disabilities 369
 Moderate to severe disabilities 370
 Special major, B.A. 301
 Sports 28
 Student
 activities 27
 affirmative action program 31
 body fee 453
 clubs and organizations 28
 debts 45
 discipline 33, 451
 government 27
 grievances 32, 322
 responsibility 33
 right-to-know and campus security act 452
 Student assistance in learning 26
 Student health center 31
 Student services 32
 Student union 28
 Study abroad 22
 Study strategy instruction certificate 374
 Summer enrollment at other institutions 49
 Summer session 41, 70, 325

T

Teaching basic mathematics certificate 231
 Teaching credential programs 40, 138
 Teaching English as second language (English), M.A. 389
 Teaching English as second language, education M.A. 363
 Telecommunications, campus 21
 Test of Written English (TWE) 320
 Testing 25
 Theatre arts, B.A. 302
 Thesis 322
 TOEFL 38, 70, 320
 Tours of campus 24
 Transcripts 55, 325
 Transfer of credit 39
 Transfer students, admission of 37
 Trustees, California State University 8
 Tuition 43

U

Unclassified postbaccalaureate standing 319
 Undergraduate
 admission requirements 36
 admissions 35
 application procedures 35
 course load 48
 degree programs 18
 degree requirements 57
 scholarship standards 53
 transfer students, admission of 37
 writing requirement 61

University fee 43
 University foundation 23
 University honors 63
 University honors program 19, 308
 University of California, Riverside 49
 University studies 310
 Upward bound program 31
 Urban planning, certificate 178
 Urban planning, M.U.P. 427

V

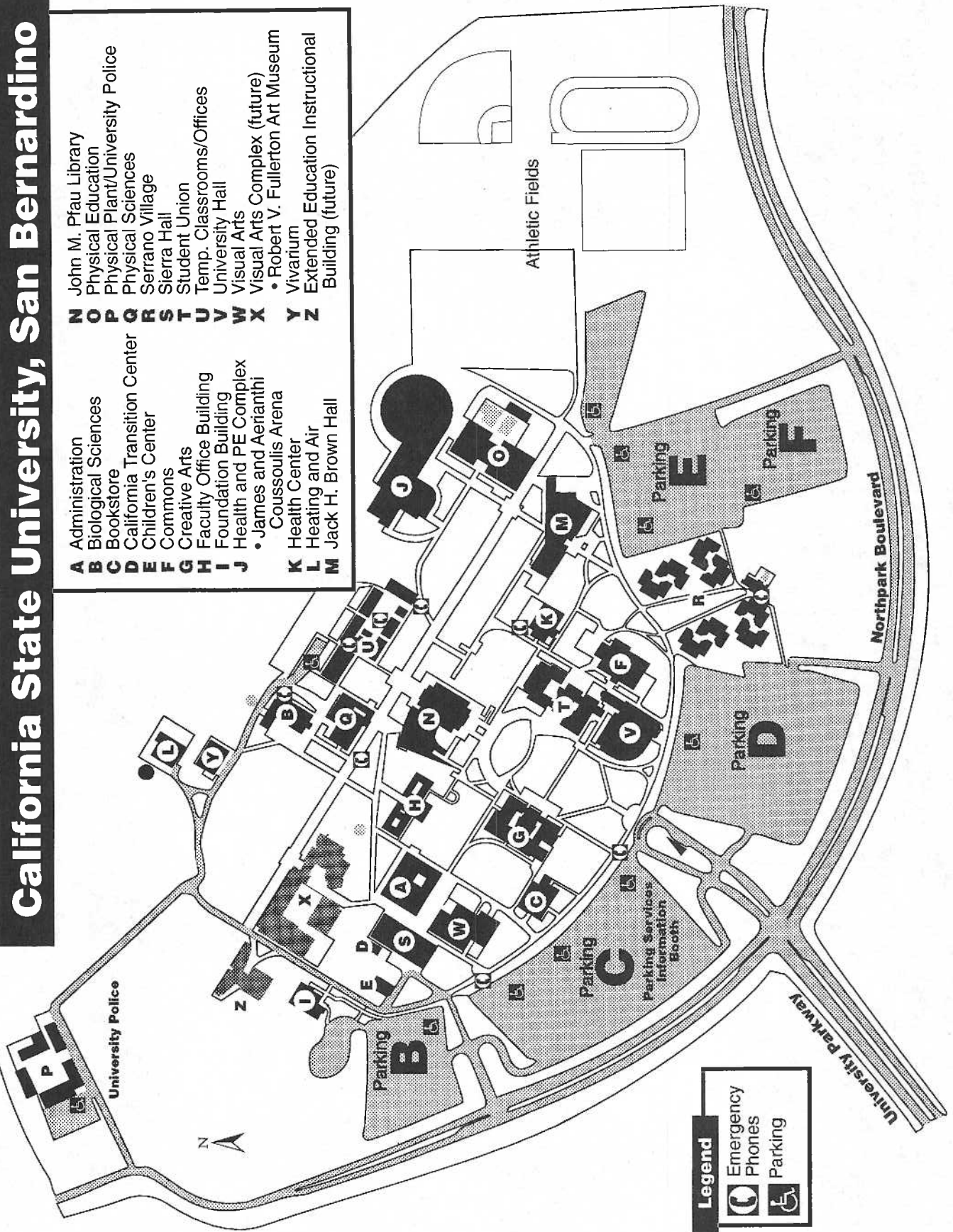
Veterans' dependents exemptions 44
 Veterans information 55, 325
 Vocational education, B.S., B.V.E. 311
 Vocational education, M.A. 364
 Vocational subjects credential 153, 371

W

Waiver of regulations 26
 Withdrawal from class 50
 Withdrawal from university 50
 Withdrawal, grades for 53
 Women's Resource Center 28
 Women's studies certificate 314
 Women's studies, minor 314
 Writing Center 26
 Writing certificate, creative 162
 Writing certificate, professional 162
 Writing requirement, graduate 321
 Writing requirement, upper-division 61

California State University, San Bernardino

A	Administration	N	John M. Pfau Library
B	Biological Sciences	O	Physical Education
C	Bookstore	P	Physical Plant/University Police
D	California Transition Center	Q	Physical Sciences
E	Children's Center	R	Serrano Village
F	Commons	S	Sierra Hall
G	Creative Arts	T	Student Union
H	Faculty Office Building	U	Temp. Classrooms/Offices
I	Foundation Building	V	University Hall
J	Health and PE Complex	W	Visual Arts
	• James and Aerianthi	X	Visual Arts Complex (future)
	Coussoulis Arena	Y	• Robert V. Fullerton Art Museum
K	Health Center	Z	Vivarium
L	Heating and Air		Extended Education Instructional Building (future)
M	Jack H. Brown Hall		



Legend

- Emergency Phones
- Parking

*California State University,
San Bernardino
5500 University Parkway
San Bernardino, CA
92407-2397*

COVER DESIGN:

Jay Wampler

PHOTOGRAPHY:

Dan Moseley

Tom Ruvo

Greg Schneider

EDITORS:

Dwan Ford

Barbara Holzman